

The New York
Academy of Medicine



By Exchange



Digitized by the Internet Archive
in 2016

<https://archive.org/details/nebraskamedicalj72unse>

LIBRARY

MAR 9 1988

NEW YORK ACADEMY
OF MEDICINE

THE NEBRASKA MEDICAL JOURNAL



119
Years



Contents

Editorial

- AMA Membership - You Owe it to Yourself **1**
Jerald R. Schenken, M.D.

Original Articles

- Lessons of the First Cocaine Epidemic **4**
David F. Musto
- Fusarium Moniliforme Pneumonia **6**
Terence L. Zach, M.D.
Robert G. Penn, M.D.
David J. Gnarra, M.D.
John L. Bever, M.D.
- Paget's Disease of the Male Breast **10**
Thomas J. Johnson, B.S.
Charles S. Tomek, B.S.
Kerry B. Patterson, M.D.
John F. Buckley, M.D.

Biopsy of Mammographic Breast Lesions

Timothy P. O'Holleran, M.D.
John D. O'Holleran, M.D.

Perinatal Page

- Neonatal Jaundice: Current Concepts **16**
David L. Bolam, M.D.
Robert M. Nelson, Jr., M.D.

Features

- President's Page **18**
- UNMC News **19**
- The Auxiliary **20**
- In Memoriam **21**
- Coming Meetings **21**

NEW YORK
2 EAST 103RD ST.
LIB-PERIODICALS DEPT
THE N.Y. ACADEMY OF MED.



I made the right choice.

I was looking for an opportunity,
not just a job.

I wanted a large,
multispecialty group.

I wanted to work
with quality professionals.

I wanted compensation
in line with my abilities,
plus investment opportunities
I didn't have to wait long
to enjoy.

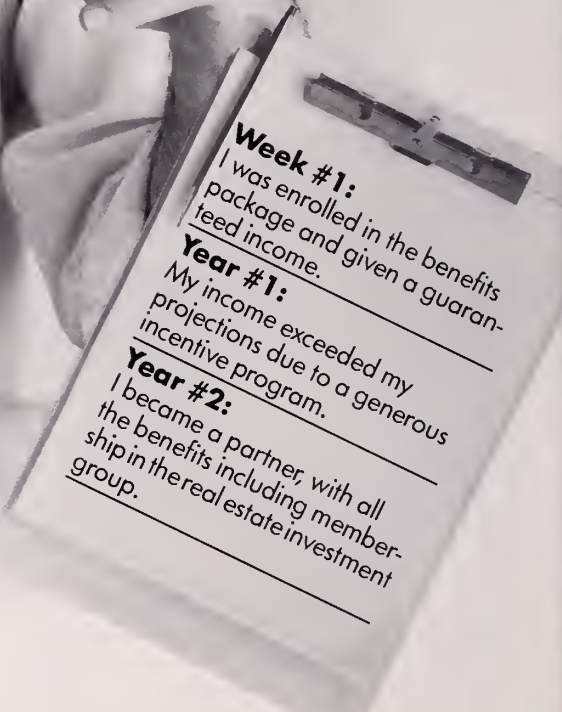
At Mullikin Medical Centers,
I found everything
I was looking for.

Alan Muncy, M.D.

Alan Muncy, M.D.

If you're looking for this kind of opportunity,
call Associate Administrator, Bill Shaw
at 213-860-6611, or send Bill your curriculum vitae.
Mullikin Medical Centers
17821 South Pioneer Boulevard
Artesia, CA 90701

Now, the opportunity is yours.
See our classified ad in this publication.



Week #1:
I was enrolled in the benefits
package and given a guaran-
teed income.

Year #1:
My income exceeded my
projections due to a generous
incentive program.

Year #2:
I became a partner, with all
the benefits including member-
ship in the real estate investment
group.

Mullikin Medical Centers

California's neighborhood doctor for more than 25 years.

Motrin[®] 800 TABLETS mg

ibuprofen



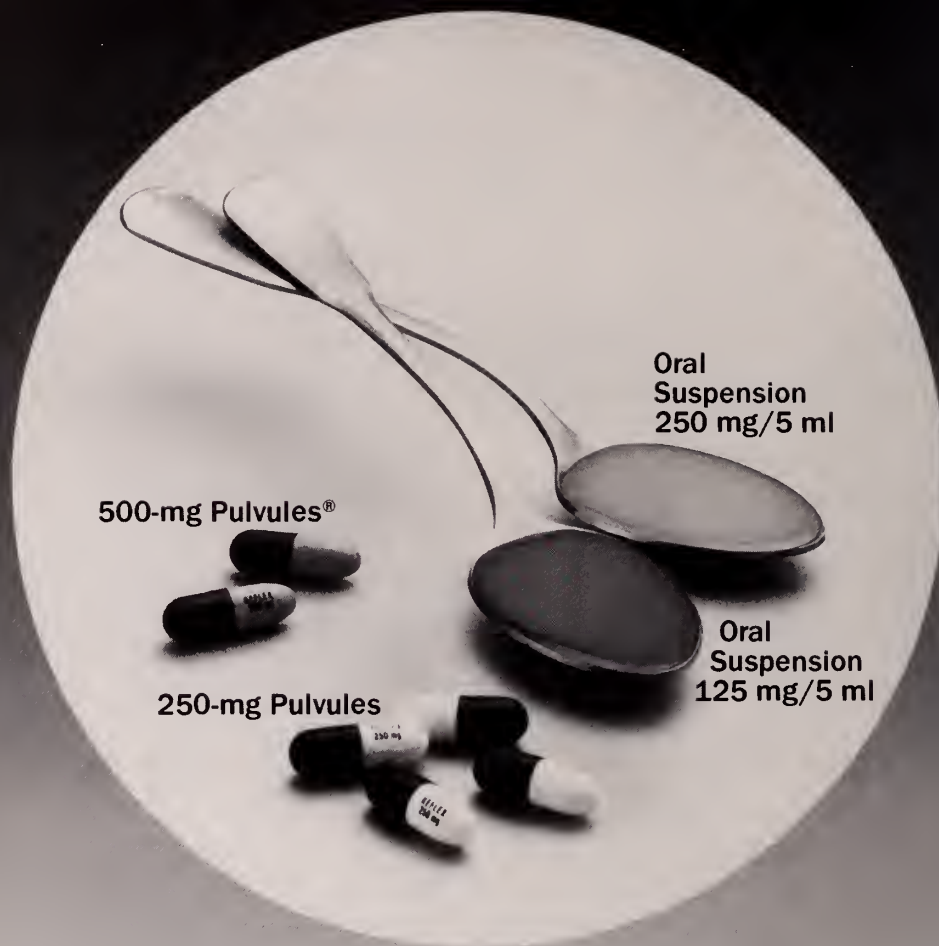
Extra strength
Convenience
Economy

Upjohn



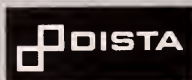
A Century
of Caring
1886-1986

Easy To Take



Keflex[®]
cephalexin

Additional information
available to the profession
on request.



420113

Dista Products Company
Division of Eli Lilly and Company
Indianapolis, Indiana 46285
Mfd. by Eli Lilly Industries, Inc.
Carolina, Puerto Rico 00630

Motrin[®] 800 TABLETS mg

ibuprofen

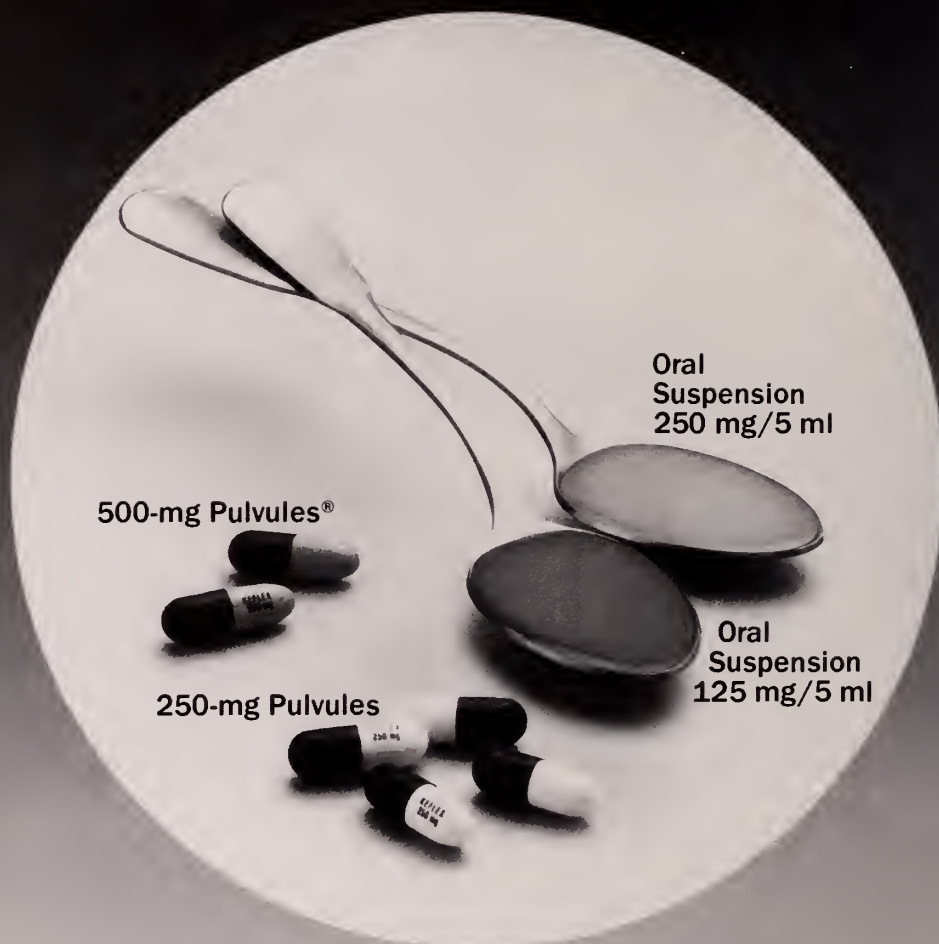


Extra strength
Convenience
Economy



A Century
of Caring
1886-1986

Easy To Take



Keflex[®]
cephalexin

Additional information
available to the profession
on request.



420113

Dista Products Company
Division of Eli Lilly and Company
Indianapolis, Indiana 46285
Mfd. by Eli Lilly Industries, Inc.
Carolina, Puerto Rico 00630

The Nebraska Medical Journal

JANUARY 1987

VOL. 72, NO. 1

EDITOR —

ALAN D. FORKER, M.D.
5505 Ellendale Road,
Lincoln, NE 68510

Associate Editors:

Deepak M. Gangahar, M.D., Lincoln
Charles S. Wilson, M.D., Lincoln

Editorial Board:

James O. Armitage, M.D., Omaha
Rodney S.W. Basler, M.D., Lincoln
Jehangir B. Bastani, M.D., Lincoln
John H. Casey, M.D., Lincoln
Paul E. Collicott, M.D., Lincoln
John F. Connolly, M.D., Omaha
Douglass Decker, Jr., M.D., Lincoln
Robert W. Gillespie, M.D., Lincoln
Stephen R. Grenier, M.D., Lincoln
Bruce D. Gutnik, M.D., Omaha
Roger Harned, M.D., Omaha
Edward A. Holyoke, Jr., M.D., Ogallala
Sushil S. Lacy, M.D., Lincoln
Hal K. Mardis, M.D., Omaha
Gilles R. G. Monif, M.D., Omaha
Walter J. O'Donohue, M.D., Omaha
William F. Rayburn, M.D., Omaha
John L. Reed, M.D., Lincoln
Jerald R. Schenken, M.D., Omaha
Kenton L. Shaffer, M.D., Kearney
Harlan C. Shriner, Jr., M.D., Lincoln
Patricia Cole Stivins, M.D., Lincoln
Harold W. Thaut, M.D., Beatrice
Jon S. Thompson, M.D., Omaha
William L. Vosik, M.D., Kearney
Arthur Weaver, M.D., Lincoln



SUBSCRIPTION RATE

\$18.00 Per Year U.S.
\$18.00 Per Year Foreign Country
Single Copies \$1.50 Each

Copyright® 1987 Nebraska Medical Association. Information concerning reprints of the articles in this Journal and concerning obtaining permission for the reproduction of any portion of this Journal may be obtained from the Editor.

The Nebraska Medical Journal does not assume responsibility for statements made or opinions expressed by the authors. Products and services advertised are neither endorsed nor warranted by the Nebraska Medical Association. The Nebraska Medical Journal reserves the right to accept or reject advertising copy.

Published monthly and Second-Class Postage paid at Lincoln, Nebraska and at additional mailing offices (ISSN 0091-6730)

Address all correspondence relating to subscriptions, advertising or address changes to William L. Schellpeper, Business Manager, 1512 First Tier Bank Building, Lincoln, Nebraska 68508. Phone (402) 474-4472.

EDITORIAL —

AMA Membership - You Owe it to Yourself..... 1
Jerald R. Schenken, M.D.

ORIGINAL ARTICLES —

Lessons of the First Cocaine Epidemic..... 4
David F. Musto

Fusarium Moniliforme Pneumonia..... 6
Terence L. Zach, M.D.
Robert G. Penn, M.D.
David J. Gnarra, M.D.
John L. Bever, M.D.

Paget's Disease of the Male Breast..... 10
Thomas J. Johnson, B.S.
Charles S. Tomek, B.S.
Kerry B. Patterson, M.D.
John F. Buckley, M.D.

Biopsy of Mammographically Suspicious Breast Lesions..... 14
Timothy P. O'Holleran, M.D., F.A.C.S.
John D. O'Holleran, Medical Student 4

PERINATAL PAGE —

Neonatal Jaundice: Current Concepts..... 16
David L. Bolam, M.D.
Robert M. Nelson, Jr., M.D.

FEATURES —

President's Page..... 18
University of Nebraska Medical Center News..... 19
The Auxiliary..... 20
In Memoriam..... 21
Coming Meetings..... 21

REPRINTS

OF YOUR

Technical Articles

Are a direct presentation of research
and a valuable supplement
to any doctor's library.



It costs very little
to run reprints —
write us for prices

Norfolk Printing Co., Inc.

118 North Fifth
NORFOLK, NEBRASKA 68701

Letterheads - Statements

Envelopes - Office Forms

Quality Printing at the Right Price

Since 1925

Nebraska's
Leading
Physicians and
Surgical
Supply House

Phone 474-3222



**DONLEY MEDICAL
SUPPLY COMPANY**

P.O. Box 83108, Lincoln, NE 68501
AUTHORIZED CONTRACT AGENT

ADVICE TO AUTHORS

Manuscripts should be submitted in duplicate to the Editor at the following address: Alan D. Forker, M.D., 5505 Ellendale Road, Lincoln, Nebraska 68510. The manuscript should be typewritten, double-spaced, on 8½ x 11 in. paper, with generous margins on each page. Number all pages in the right upper corner with the author's surname.

Review articles will be considered, and should generally be limited to less than 4,000 words and approximately 30 references.

Manuscripts describing original clinical or laboratory research should be limited to 2,000 words and approximately 20 references.

Acknowledgements must be given when material from other publications is included. Provide names of authors, title of article, title of journal or book, volume number, pages, month and year, and publisher's permission to reprint.

Always send a covering letter or letter of transmittal with each manuscript, and refer to the manuscript by its title, in the letter and all correspondence. Do not send a manuscript that was published elsewhere.

Title page: each manuscript should have a title page, including the full name, academic degree, and hospital or university affiliation of each author. A name and address for reprint requests should be included on the title page, including street address, city, state, and zip code.

Summary for article: all major scientific articles should be accompanied by a summary at the end of the article, summarizing the key information and recommendations presented.

References: should be listed in the order in which they appear in the article and should be typed double-spaced. Authors are responsible for the completeness and accuracy of all cited references. Journal references should include authors' names and initials, title of article, abbreviated name of Journal (as listed in Index Medicus), volume number, inclusive pages, and year of publication. References to books should include authors, title, location and name of publisher, year of publication, edition, and page numbers.

Tables and illustrations: should be typed double-spaced on separate sheets of 8½ x 11 in. paper. Each Table should have a title. Illustrations should be prepared professionally and submitted as high-quality, glossy, unmounted black-and-white photographic prints, at least 5 x 7 in. Do not send original artwork. Each illustration should be consecutively numbered and cited in the text. Each photograph should have a gummed label on the back containing the figure number, name of senior author and an arrow indicating top of figure. Legends should be typed double-space for each illustration. Permission to reproduce a picture of a patient is needed, if such a picture is included.

Letters-to-the-Editor: letters are encouraged by all readers and will be published as space permits and at the discretion of the Editor. All letters should be accompanied by the notation: For publication. Galley proofs generally will not be returned to the authors pre-publication.

Manuscripts will be published in the order in which they are received, particularly in the order in which galley proofs are returned from the authors. The Editor of this Journal assumes no responsibility for opinions and claims expressed in an article published in this Journal.

Reprints should be ordered from the printer, Norfolk Printing Company, Inc., P.O. Box 278, Norfolk, Nebraska 68701.



**NEBRASKA
MEDICAL ASSOCIATION**

119th Annual Session

April 24-28, 1987

CORNHUSKER HOTEL

Lincoln, Nebraska



Dates To Reserve For 1987

April 24, 25, 26, 27, 28

NMA ANNUAL SESSION

Cornhusker Hotel Lincoln, Nebraska

ORGANIZATIONS, NATIONAL

American Academy of Family Physicians
1740 West 92nd St., Kansas City, MO 64114

American Academy of Pediatrics
James E. Strain, M.D., Executive Director
141 Northwest Point Road, P.O. Box 927
Elk Grove Village, IL 60007

American Academy of Physician Assistants
F. Lynn May, Executive Vice President
1117 N. 19th St., 3rd Floor
Arlington, VA 22209

American Academy of Ophthalmology
Thomas P. Kearns, M.D., President
655 Beach Street, P.O. Box 7424
San Francisco, CA 94120-7424

American College of Emergency Physicians
Colin C. Rorrie, Jr., Ph.D., Exec. Director
Box 619911, Dallas, TX 75261-9911

American College of Legal Medicine
Miss Betty Hanna, Executive Secretary
213 W. Institute Place, Ste. 412, Chicago, IL 60610

American College of Obstetricians & Gynecologists
Warren H. Pearse, M.D., Executive Director
600 Maryland Avenue SW, Ste. 300 E
Washington, D.C. 20024

American College of Physicians
John R. Ball, M.D., F.A.C.P., Exec. Vice President
4200 Pine St., Philadelphia, PA 19104

American College of Radiology
John J. Curry, Executive Director
1891 Preston White Drive, Reston, VA 22091

American College of Surgeons
C. Rollins Hanlon, M.D., Director
55 East Erie St., Chicago, IL 60611

American Diabetes Association, Inc.
Robert S. Bolan, Exec. Vice President
1660 Duke Street, Alexandria, VA 22314

American Heart Association National Center
Mr. Dudley Hafner, Exec. Vice President
7320 Greenville Avenue, Dallas, TX 75231

American Hospital Association
Carol M. McCarthy, Ph.D., J.D., President
840 North Lake Shore Dr., Chicago, IL 60611

American Medical Association
James H. Sammons, M.D., Exec. Vice President
535 North Dearborn St., Chicago, IL 60610

American Society of Anesthesiologists
Mr. J. W. Andes, Executive Secretary
515 Busse Hwy., Park Ridge, IL 60068

American Society of Clinical Pathologists
Robert A. Dietrich, M.D., Chief Executive
2100 W. Harrison St., Chicago, IL 60612

American Society of Internal Medicine
Joseph F. Boyle, M.D., Exec. Vice President
1101 Vermont N.W., Ste. 500, Washington, D.C. 20005

American Urological Association, Inc.
Mr. Richard J. Hannigan, Executive Secretary
1120 No. Charles St., Baltimore, MD 21201

Arthritis Foundation
Clifford M. Clarke, C.A.E., President
1314 Spring St., N.W., Atlanta, GA 30309

International College of Surgeons
F. C. Ottati, M.D., Int. Sec. General
1516 North Lake Shore Dr., Chicago, IL 60610

National Rehabilitation Association
633 S. Washington St. Alexandria, VA 22314

Radiological Society of North America
James J. McCort, M.D., President
1415 W. 22nd St., Oak Brook, IL 60521

**South Central Section of the American
Urological Association, Inc.**
Henry Kammandel, M.D., Past President
8300 Dodge St., Ste. 407, Omaha, NE 68114



Jerald R. Schenken, M.D.

Hear Your AMA BOARD OF TRUSTEES REPRESENTATIVE

JERALD R. SCHENKEN, M.D.

When he will address the
Socio-Economic Breakfast Meeting
on Tuesday, April 28.

★ ★ ★ ★ ★

NMA ANNUAL SESSION

April 24-28

Cornhusker Hotel

Lincoln, NE

Reservation forms will be sent in late March.

Are You Available for Public Speaking Engagements?

Or for

Consulting Assignments?

If you are, you will then want your name
and credentials in the new
Speakers/Consultants Directory
Now in production and due for publication
in early 1987.

For details write to:

Contemporary Speakers
220 Bank of Nebraska Mall, Suite B
The Center Mall, 42nd and Center Streets
Omaha, Nebraska 68105

or call (402) 345-0975

AMA News Notes

Medical advances during the next decade will make heart transplants a reasonable consideration for many more patients, AMA Executive Vice President James H. Sammons, M.D., wrote Health Care Financing Administration (HCFA) Administrator William L. Roper, M.D. For this reason, guidelines for Medicare heart transplant coverage must be carefully crafted. "The AMA is concerned that the proposed restrictions inappropriately will limit the availability of the life-saving procedure," Dr. Sammons said.

★ ★ ★

American Medical Political Action Committee's winning percentage for all House and Senate elections was 86%. In House primary and general election cycles, AMPAC participated in 628 campaigns, involving 317 Democrats and 311 Republicans, and won 590 or 94%.

In the Senate cycles, AMPAC was involved in 59 campaigns, involving 18 Democrats and 41 Republicans, and won 46 or 78%.

★ ★ ★

THE NEBRASKA MEDICAL JOURNAL

AMA Membership - You Owe it to Yourself

LET'S get right to it! Nationwide, only 46% of physicians are members of the American Medical Association, and that's not in the best interest of either physicians or patients. In Nebraska, we are doing better, but we have a long way to go to reach our goal of 100% AMA membership. What we need is understanding and commitment: understanding of our obligations and opportunities, and commitment to participate in the myriad activities essential to organized medicine.

The AMA — What is it and what does it do?

The American Medical Association is the largest, most comprehensive, most effective organization in the world representing the interests of physicians and patients. It was founded in 1847 and has served medical, educational, political, and socioeconomic needs continuously since that time. It is a truly democratic organization. State medical associations and medical specialty societies provide delegates to the AMA's 380 member House of Delegates which meets twice a year to hear testimony, study reports and resolutions, and establish policy by majority vote. It's Trustees are elected by the House. They are responsible for overseeing the day-to-day operations of the AMA and for interpreting and implementing actions based on House policy.

The AMA operates, supervises, and/or participates in numerous educational, political, ethical, and socioeconomic arenas. The standards of excellence in our medical school and residency programs are due in large part to the efforts of the AMA, especially since issuance of the AMA sponsored Flexner report in the early 1900's. The operation of your medical staff and especially its quality assurance functions are the direct result of actions taken by the AMA's councils and House of Delegates and espoused by the seven AMA commissioners to the JCAH. Current public awareness that liability risks are a major impediment

JERALD R. SCHENKEN, M.D.

Trustee — American Medical Association

to the orderly transaction of business and to the compassionate practice of professionals can be traced directly to the AMA and its Federated State Association, which began to call attention to the growing crisis in the early '70's.

And, frankly, why do you think that the USA is the only country in the industrialized west not saddled with the economic and bureaucratic yolk of some type of national health insurance or more onerous type of socialized medicine? You're right—the AMA. It's opposition to these programs in the several decades following World War II has managed, at least so far, to stave off those threats. Of course you're right when you point out that all of the AMA's activities have not been victories.

As one who has been representing you in Lincoln, Nebraska and Washington, D.C. for over 20 years, I can truly say that many things have been done that have improved patient care and/or prevented real disasters but about which you will probably never hear. For example, the AMA was instrumental in convincing the House of Representatives' Committee on Energy and Commerce that competitive bidding for medical services under the Indian Health Service was not in the best interest of the beneficiary native Americans. We argued successfully that the government had an obligation to conserve tax revenues, but not at the expense of the health of our patients. Numerous examples were provided where competitive bids were made at such a low level that quality could not be maintained. Cervical Pap smears were examined casually or not at

all. Respiratory therapy provided by a group that was not even in business before the bid, resulted in fourfold increase in **mortality** rate. Because of our efforts, bids may be requested but the senior medical officers in charge of the region has the final say about the quality of the services needed. This may seem like a small example to you, but it impacts on us in Nebraska and was so dramatic that I felt compelled to relate it to you.

In my travels around the state, I am frequently asked about the activities of the AMA in Washington. I wish that I could take every physician with me to congressional hearings and debates. They would truly benefit from seeing and feeling the intensity of conflict, the pressures facing their representatives, and the brutal imperatives to get something done about the staggering problems of trade and budget deficits. Politics in the art of the possible. I have always followed three guidelines which have proved valuable to me over and over again. If you want to get something done, it should be: (1) desirable, (2) feasible, and (3) such that you will not be unacceptably worse off for having tried and failed. The AMA has done a truly magnificent job considering both the existing health care situation and the alternative to no action by the AMA. The every day interaction between patients and physicians presents similar dilemmas. Physicians try for cure of their patients but are often satisfied or even happy when palliation has extended and improved the quality of life. And cures may be just around the corner. We must live to fight another day. Political winds blow irregularly and unpredictably. After Watergate, who of you would have predicted a Republican senate and a conservative President in less than a decade?

If all of this is true, why do some of our physicians not join the AMA and help in the fight? I'm not really sure, and I'm not sure whether nonmembers know either. I have talked to many and find them to be fine physicians of high moral principles who want the same quality of life for themselves, their families, and their patients as the rest of us do. What I'd like to do is tell you some of the explanations that I hear and then respond to them. Most physicians are probably too busy taking care of their patients—God bless them

for it—to have the time to analyze the issues in the depth required.

1. **The AMA is not effective—look at the unfair Medicare profiles and fee freeze.** Well, none of us like the outcome, but without AMA's substantial efforts we would already also have had mandatory assignment of benefits at existing profiles. The AMA filed suit in Indiana trying to get this clearly prejudicial and probably unconstitutional infringement on physician's rights overturned. The judge saw it differently, thereby helping to confirm that we **do** have problems with our civil tort system.

The AMA is currently working on a plan that will provide a vehicle for the Federal government to limit its payment of taxpayers' money for Medicare while allowing patients who are not in need to supplement their benefits through the private sector. The AMA is effective—think of the alternatives.

2. **I'm an NMA member—isn't that enough?** Great? The Nebraska Medical Association needs you as well. But the NMA would not be able to operate as it does on your behalf without the vast resources the AMA makes available to us free of charge. The AMA provides reports and research on thousands of scientific, medical, social, and legislative issues that are available to us by just a telephone call. The AMA responds on our behalf to national groups such as the JCAH which accredit our medical schools, hospitals, etc. The AMA's Washington office provides interface with our congressional delegation and helps coordinate their efforts with those of other states on our behalf. National issues assigned to congressional committees cannot be effectively coordinated without the AMA. Recently, Nebraska was discriminated against in the calculation of the Rural Wage Index for DRGs under Medicare. The AMA assisted our congressional delegation in a successful two-year fight to rectify this problem for our struggling rural institutions. And it makes sense. Issues are generic and affect many states in a similar way. The AMA can and does research the issues in great depth and provides information to all who ask so that

the individual states do not have to "pay through the nose" to reinvent the proverbial wheel. The AMA is essential to the NMA. It's essential to you.

3. I can't support the AMA. It took a position on an issue of critical importance to me with which I don't agree.

This is truly one of the most vexing problems presented by a democracy. If you want freedom and majority rule, you have to be willing to accept majority vote while you work harder to convince your peers that your own position should ultimately prevail. That's what is great about America. That's what is great about the AMA. None of us agrees with every policy of our government, but we Americans support our country and fight for what we believe, and do not abandon our country over a single issue. I have never met an individual physician who does not agree with the overwhelming majority of policies and goals of the AMA. We need you all as AMA members. On the inside you have a chance to change AMA policy. If you are on the outside, you leave that option to others.

4. Membership costs too much. I'm just starting out in practice!

Sure. Membership is not free. Neither is responsibility. Both the AMA and the NMA have recognized the problems of young physicians. The AMA has assisted

young physicians entering practice in many ways. It also has a current program for reduced dues for student and resident physician members as well as for the first two years in practice. In its continuing effort to be responsive, the AMA has recently approved a section for young physicians in its House of Delegates. And, as they say, all this for less than a dollar a day. It's not whether you can afford to join; it's really your professional obligation to join and work to preserve the quality medical care that your predecessors in the profession worked to develop and pass on to you and your peers.

We all have too much to gain and too much to lose. Please join with me and the 1,200 other Nebraska physicians who are currently both NMA and AMA members as we work together to meet the challenges of the future. You owe it to yourself. You owe it to your patients. And you owe it to your parents and teachers who handed the baton to you so that you can nourish and preserve our profession for the future.

If you have questions or concerns, write or call. I'd like to hear from you. I plan to travel about the state over the next year or so to talk to physicians and personally listen to their problems and concerns. But most important, send in your application and join!

Our goal should be unity—unity of purpose, unity of spirit, and unity of membership. Welcome aboard!

Lessons of the First Cocaine Epidemic

Reprinted from the WALL STREET JOURNAL
Wed., June 11, 1986

THE latest complication in the current cocaine epidemic is "crack", a relatively cheap form of cocaine that can be smoked and quickly absorbed into the lung's blood supply. The effect is intense but brief, unless the user sustains it by smoking more cocaine. After repeated use of crack, the craving is so great that the user may feel a need to obtain cocaine at any cost. Crack has been called an unprecedented threat; the whole cocaine episode is assumed to be unique in U.S. history. It isn't, and our previous experience with cocaine around the turn of the century provides some instructive lessons.

Cocaine for inhalation was easily purchased at the corner drugstore in the 1880s. Cocaine was available in a multitude of forms. Parke, Davis & Co. produced "coca cigarettes" and "coca cheroots" as well as "cocaine inhalant". Cocaine became extremely popular among Americans. For one reason, the U.S. had no national laws controlling drug sales or therapeutic claims for drugs, including opium and cocaine. Also the advertising and distribution of drugs had become a highly efficient process. Parke, Davis & Co. reported that within a year of cocaine's commercial introduction, there was "not a second-rate drug store" that didn't have a supply and that manufacturers had "been obliged again and again to increase their capacity to produce it, so active is the demand."

'Long Day's Journey'

Drugs, including narcotics, enjoyed an open market. Easy availability led to their widespread use. In the 1890's, opium reached a peak of percapita consumption in America that probably has never been equaled. Cocaine, which had become available in a pure and cheap form beginning in 1885, peaked in consumption in the first decade of this century. The damage to users and their families caused by narcotics eventually led to a popular insistence on some legal curbs. Eugene O'Neill's

DAVID F. MUSTO

Professor of Psychiatry and the History of Medicine
Yale School of Medicine, New Haven, Conn.

play "A Long Day's Journey Into Night," set in 1912, illustrates the common abhorrence of narcotics of that time. Drug use was at a level at least comparable to today's, compounded by low-cost, high-purity and legal distribution.

When restrictive laws were enacted they reflected fearful attitudes toward narcotics. The result of this changed perception of cocaine and subsequent legal controls was a great reduction in cocaine use for several generations. Still, establishment of a broad public consensus against cocaine took about 20 years, and then a decade or more passed before it became a minor problem. Public memory of the first drug "epidemic" has long since faded away, and with it went the public's slowly acquired resistance to cocaine.

This memory loss had led not only to misperceptions about current drug issues but also to pessimism about whether the U.S. cocaine problem can be curbed. It can be, but the process is likely to be a painfully slow one, as shown during the first "cocaine epidemic."

This first epidemic lasted from 1885 until the 1920s, about 35 years. There were three stages: an initial euphoria about an apparently harmless, indeed, a valuable and helpful stimulant; a middle period of dispersion and multiplying instances of prolonged use; and, finally, a powerful rejection of cocaine as its popular image became as negative as it had once been positive. This last stage was so effective in discouraging the use of cocaine that the drug had faded into obscurity until recently.

Wonder and joy at the appearance of a mental stimulant that appeared to have no bad

side effects characterized the first, or euphoric stage, which lasted about 10 years. Cocaine, to quote a drug manufacturer's statement to the medical profession, could "supply the place of food, make the coward brave, the silent eloquent, free the victims of the alcohol and opium habits from their bondage, and, as an anesthetic, render the sufferer insensitive to pain . . ."

Medical experts were as enthusiastic and sincerely uncritical as the manufacturers. Sigmund Freud popularized the drug in Europe by quoting accounts of its miraculous properties from U.S. medical journals. One of the most enthusiastic U.S. supporters was a former surgeon-general of the Army and an eminent New York neurologist, Dr. William A. Hammond. He recommended cocaine for a variety of ailments, especially depression. He found that cocaine treatment could "make the most dismal melancholic cheerful and (the cocaine would) act permanently." He went so far as to state that he believed there was not "a single instance of well-pronounced cocaine habit, the patient being able to stop it at any time, if he chose to do so." He reassured doubters by noting that cocaine has been chosen as the official remedy of the Hay Fever Association.

With experts reassuring the public that cocaine was harmless and not addictive, consumption soared. Warnings were also published, but there was little desire to listen to kill-joys. Because many of the negative effects would be apparent only as the casualties of prolonged use accumulated, the first stage was a bull market in cocaine.

As cocaine's casualties increased in number and range, individuals were more likely to know of someone who had experienced its bad effects. Euphoria became a more difficult mood to maintain during this second stage, which also lasted about a decade. As casualties mounted, cocaine was no longer seen as a harmless or non-addicting drug. Still, during the 1890's its consumption increased until it reached a peak just after the turn of the century.

Cocaine's disfavor grew not only from direct observation of its effects but as an outgrowth of a growing health movement that was not only concerned with cocaine but with alcohol's effects on society, fear of food additives,

outrage over industrial carelessness with the environment, and a philosophy of exercise and simple healthy food.

Cocaine's link with violent crime and paranoid mind-sets helped to associate the drug with sources of social unrest. Cocaine supposedly caused southern blacks to behave violently against whites — although ample evidence exists that whites used cocaine at least as frequently as blacks. Cocaine was also associated with prostitution and criminal gangs. As public anxiety about cocaine accelerated, it became as feared as it had once been hailed.

It was at this point that laws directed against cocaine were enacted. The first federal law was the Food and Drug Act of 1906, requiring any over-the-counter remedy containing cocaine to list it as an ingredient. Then, in 1914, the federal government, after several years of effort, enacted the Harrison Anti-Narcotic Act, which controlled the distribution of opiates and cocaine. One of the most important and stringent state laws was the New York anti-cocaine law of 1913. This law left no room for non-medical use of cocaine. Cocaine had become the archetype of the dangerous drug, and this image would have a profound influence on later drug laws such as the prohibition of heroin manufacture in the U.S. (1924) and the Marijuana Tax Act (1937).

Peer pressure, so often given as the reason for the spread of drugs, can be just as potent a force against drug use, once the image of a drug's effects has changed from miraculous to destructive. Cocaine use declined in America and did not surface again until a vivid memory of its effects had been lost. But when cocaine did reappear about 1970 and a euphoric stage recurred, the laws enacted during the third stage of the last epidemic and gradually strengthened since then appeared draconian and bizarre. The laws were not out of synch with public attitudes.

Recent suggestions have been made to legalize cocaine because its use is ubiquitous. The example of the first epidemic, however, suggests that its current widespread use may be the prelude to a vigorous public rejection of the drug.

Social Immunization

If so, legal controls are likely to facilitate

cocaine's demise. In the meantime, enforcing laws without vigorous public support is obviously very difficult. But we can reasonably assume that as cocaine's effects become more obvious — and crack is speeding up this process — a similar outrage against cocaine will lead to reduced demand, more effective law enforcement, and a new public memory regarding cocaine, a form of social immunization that will last at the very least for a generation or two.

However, we have not yet found a method of developing an effective and lasting public antipathy toward cocaine without, at the same time, engaging in a certain amount of emotional overkill. It would be far better if a public consensus against cocaine and other seductive drugs did not have to be relearned every few generations, but there seems to be no easy ways to ensure such a lasting public attitude.

* * *

Fusarium Moniliforme Pneumonia

FUSARIUM is a genus of common soil fungi that may be pathogenic to certain plants but rarely causes disease in man. Most human infections have been superficial involving the nails, skin, and cornea. However, the fungus has been isolated from deeper tissues in immunosuppressed patients. This is a case of *Fusarium moniliforme* pneumonia in an immunosuppressed patient.

Case Report

The patient was a five-year-old white male with dysmyelopoietic syndrome diagnosed three months prior to admission who was readmitted with fever and pancytopenia. He had received intensive induction chemotherapy consisting of cytosine arabinoside and daunorubicin during his initial admission and had been discharged six days prior to this admission on prophylactic trimethoprim-sulfamethoxazole. While at his home in rural Nebraska, the patient had ridden on his father's combine during the autumn harvest. Four months prior to admission, he had participated in the wheat harvest in Kansas. The patient had no other travel history.

Physical exam upon admission revealed a pale five-year-old male with a temperature of 102°F. He had no skin rashes or adenopathy, and the pulmonary exam was entirely normal. No focus of infection was appreciated. Initial laboratory values revealed a leukocyte count of $100/\text{mm}^3$ with 100% lymphocytes. Hemoglobin was 5.9 gm/dl with hematocrit of 17%

TERENCE L. ZACH, M.D.

Department Pediatrics
University of Nebraska Medical Center
Omaha, Nebraska

ROBERT G. PENN, M.D.*

Assistant Professor of Pediatrics
Department of Pediatrics
University of Nebraska Medical Center
Hospital Epidemiologist
Methodist and Childrens Memorial Hospital
Omaha, Nebraska

DAVID J. GNARRA, M.D.

Assistant Clinical Professor Pediatrics
University of Nebraska Medical Center
Department of Pediatric Hematology/Oncology
Childrens Memorial Hospital
Omaha, Nebraska

JOHN L. BEVER, M.D.

Department of Pediatric Hematology/Oncology
Childrens Memorial Hospital
Omaha, Nebraska

and platelet count of 43,000. Serial blood, stool, urine, and throat cultures were obtained and all remained negative. The patient was empirically placed on cefotaxime and tobramycin. On the eleventh hospital day, the patient began having signs of respiratory distress including tachypnea, intercostal retractions, and decreased right-sided breath sounds with moderate crackles. Radiographs of the chest revealed right lower lobe consolida-

*Reprint request: Robert G. Penn, M.D., University Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, NE 68105. (402) 559-4000.

tion. Trimethoprim-sulfamethoxazole was started on day 12. Tobramycin was changed to amikacin the following day and vancomycin was added. A thoracentesis was performed and gram stains, bacterial and fungal cultures, acid-fast bacteria smears and cultures, and silver stains for **Pneumocystis carinii** were negative. However, four subsequent sputum cultures on days 11, 12, and 14 grew **Fusarium moniliforme**. A stool for fungus culture was positive for **Fusarium** species. He was placed on amphotericin B and the dose was advanced to 1 mg/kg/day. The minimum inhibitory concentrations (MIC) of flucytosine, ketoconazole, miconazole, and amphotericin B to the organism were greater than 160 mcg/ml, 12.5 mcg/ml, 1.56 mcg/ml, and greater than 5.0 mcg/ml, respectively. The patient defervesced and his pulmonary symptoms cleared. However serial chest radiographs after eight weeks of amphotericin B revealed no change in the right lower lobe consolidation. Because of his immunocompromised condition and the possibility of reactivation of infection after discontinuation of amphotericin B, the patient underwent a right lower lobectomy on day 71 of hospitalization.

Pathologic exam of the lung revealed an area of extensive infarction and necrosis with partial circumscription by a thick gray-walled capsule. No inflammatory cell content was noted although Gomori methenamine silver stains did reveal fungal structures with septate branching hyphae largely negative by periodic acid Schiff reaction. Many of the fungi were noted to be growing within blood vessels. Acid-fast bacteria smears and cultures and fungal cultures of the lung were negative. The patient received seven days of amphotericin B post-operatively for a total of 47/mg/kg over 63 days. Follow-up chest X-rays and sputum cultures revealed no evidence of recurrent **Fusarium** infection.

Despite multiple courses of a variety of chemotherapeutic agents and aggressive supportive care, the patient converted to acute non-lymphocytic leukemia and died approximately 18 months later. No autopsy was obtained.

Discussion

As a common soil saprophyte, **Fusarium** is best known as a plant pathogen. This fungus

causes spoilage of a variety of grains. Fusarial mycotoxins contaminating midwestern feed corn have been implicated as a cause of vulvovaginitis, testicular atrophy, and sterility in swine.^{1,2} The most common infections in man are localized to the skin, nails, and cornea. With the increased use of powerful immunosuppressive agents for the treatment of malignancies, the **Fusarium** species has been added to the list of opportunistic pathogens causing invasive disease. Despite the growing number of immunosuppressed patients, **Fusarium** remains a rare cause of systemic infection. The most common fungal opportunistic infections are caused by **Candida**, **Aspergillus**, **Cryptococcus**, and the **Phycomycetes**.³ A recent review of the literature documented eleven cases of invasive **Fusarium** infections.⁴ Subsequently, eight additional cases have been reported.⁵⁻¹⁰

Invasive **Fusarium** has been isolated from the eye,¹¹ bone,¹² joint,¹⁰ esophagus, liver, spleen, cecum,¹³ pancreas, lungs,¹⁴ kidneys, brain, heart and subcutaneous tissues.¹⁵ Almost all patients have had altered host defense mechanisms, either altered skin barriers secondary to extensive burns or altered immunologic systems secondary to immunosuppressive agents. Of the eighteen reported cases, seven have been pediatric patients.^{6,7,9,12,15-17}

Only three other cases of pulmonary involvement have been documented, and this is the youngest patient reported to date (Table). Young et al. reported the first case of **Fusarium** pulmonary infection in a 32-year-old with lymphoma and severe varicella-zoster infection.¹⁴ Wheeler et al. reported a 24-year-old with extensive burns who had **F. oxysporum** cultured from both lungs at necropsy. The pulmonary infection by the **Fusarium** was thought to be an important contribution to the cause of death.⁴ Blazar et al. reported a 31-year-old with acute myelomonocytic leukemia who had undergone a bone marrow transplant and developed pulmonary infiltrates with positive sputum and bronchoscopy culture for **Fusarium** species.⁷ A 17-year-old female with acute lymphocytic leukemia and bone marrow transplant had **Fusarium** species cultured from nasal discharge and maxillary sinus aspirate. Despite fluffy pulmonary infiltrates on chest X-ray and several needle and open

TABLE
Fusarium Pulmonary Infections

Author	(Year)	Age (Years)	Species	Minimum Inhibitory Concentrations (mcg/ml)			Outcome
				Amph. B.	5FC	Miconazole	
Young ¹⁴	(1978)	32	F. moniliforme	N.D.*	N.D.	N.D.	Died
Wheeler ¹	(1980)	24	F. oxysporum	100	100	0.39	Died
Blazar ⁷	(1984)	31	F. species	2.5	40	N.D.	Died
Blazar ⁷	(1984)+	17	F. species	0.6	40	N.D.	Died
Zach	(this report)	5	F. moniliforme	>5.0	>160	1.56	Died

*N.D. - Not Done

+ - Possible pulmonary case

Amph. B. - amphotericin B

5 FC - flucytosine

lung biopsy attempts, no fungus was cultured. Branching septate hyphae were seen by Gomori methanamine silver stain; however, differentiation of **Aspergillus** from **Fusarium** cannot be done by this method.¹⁴

The pathogenesis of **Fusarium** pneumonia is unknown. Two of the three prior cases had denuded skin surfaces from burns or severe varicella-zoster infections.^{4,14} This was probably the portal of entry for the fungus with septic embolization to the lungs. Our patient had an intact skin surface. We surmise that he inhaled a large inoculum of the fungus while in a significantly immunocompromised state which led to a primary pulmonary infection. Since **Fusaria** fungi and spores are almost ubiquitous in the soil of temperate climates, our patient may have been exposed either while riding in a combine during the autumn harvest in central Nebraska or the summer wheat harvest in Kansas.

Amphotericin B given in doses of 1 mg/kg/day yield serum levels of 1-2 mcg/ml.¹⁸ Drug levels were not determined in our patient, but the amphotericin B MIC against the **Fusarium** was greater than 5.0 mcg/ml. Minimum inhibitory concentrations were reported on two of the three other **Fusarium** pulmonary cases (Table). In vitro susceptibility of some fungal infections and clinical response to amphotericin B have been reported to be poorly correlated.¹⁸ Despite the in vitro resistance of the **Fusarium** infecting our patient, he responded clinically to 1 mg/kg/day of amphotericin B. However,

because of the extensive pulmonary damage and the fear of relapse of infection, lobectomy was required.

Conclusion

We report the youngest case of **Fusarium** pneumonia recorded to date. Our patient clinically responded to amphotericin B. However, because of the fear of relapse of infection and the extensive localized pulmonary damage caused by the fungus, a lobectomy was performed. Those caring for severely immunosuppressed patients should be alert for this unusual opportunistic pathogen.

References

1. McNutt SR, Purwin P, Murray C: Vulvovaginitis in swine. Preliminary report. **Journal of the American Veterinary Medical Association** 1928; 73:484-492.
2. Schoental R: Fusarial mycotoxins and behavior: Possible implications for psychiatric disorder. **British J of Psychiatry** 1985; 146:115-119.
3. Gold JW: Opportunistic fungal infections in patients with neoplastic disease. **Am J Med** 1984; 76:458-463.
4. Wheeler MS, McGinnis MR, Schell WA, et al: **Fusarium** infection in burned patients. **AJCP** 1980; 75:304-311.
5. Mutton KJ, Lucas TJ, Harkness JL: Disseminated **Fusarium** infection. **Med J Aust** 1980; 2:624-625.
6. Steinberg GK, Britt RH, Enzmann DR, et al: **Fusarium** brain abscess. Case Report. **J Neurosurg** 1983; 56:598-601.
7. Blazer BR, Hurd DD, Snover DC, et al: Invasive **Fusarium** infections in bone marrow transplant recipients. **Am J Med** 1984; 77:645-651.
8. Kiehn TE, Nelson PE, Bernard EM, et al: Catheter-associated fungemia caused by **Fusarium chlamydsorum** in a patient with lymphocytic lymphoma. **J Clin Microbiol** 1985; 21:501-504.

9. Chaulk CP, Smith PW, Feagler JR, et al.: Fungemia due to **Fusarium solani** in an immunocompromised child (in press).
10. Jakle C, et al.: Septic arthritis due to **Fusarium solani**. **Journal of Rheumatology** 1983; 10:151-153.
11. Rowsey JT, Acers TE, Smith DC, et al.: **Fusarium oxysporum** endophthalmitis. **Arch Ophthalmol** 1979; 97:103-105.
12. Bourguignon RL, et al: **Fusarium** species osteomyelitis. A case report. **J Bone Joint Surg** 1976; 58A:722-723.
13. Gutmann L, Chou SM, Pore RS: **Fusariosis**, myasthenic syndrome and aplastic anemia. **Neurology** 1975; 25:922-926.
14. Young NA, et al.: Disseminated infection by **Fusarium moniliforme** during treatment for malignant lymphoma. **J Clin Microbiol** 1978; 7:589-594.
15. Abramowsky CR, Quinn D, Bradford WD, et al.: Systemic infection by **Fusarium** in a burned child. **J Pediatr** 1974; 84:561-564.
16. Benjamin RP, Callaway JL, Conant NF: Facial granuloma associated with **Fusarium** infection. **Arch Dermatol** 1970; 101:598-600.
17. Cho CT, Vats TS, Lowman JT, et al.: **Fusarium solani** infection during treatment for acute leukemia. **J Pediatr** 1973; 83:1028-1031.
18. Medoff G, Kobayashi GS: Strategies in the treatment of systemic fungal infections. **NEJM** 1980; 302:145-155.

Paget's Disease of the Male Breast

IN 1874, Sir James Paget reported a relationship between eczema and the subsequent development of carcinoma of the breast in 15 women.¹ The characteristic histology of the areolar lesion was described in 1889 by M. J. Darier.² It is estimated that 900 new cases of invasive male breast cancer will develop this year with an estimated mortality of 300 cases.³ Approximately 30 of these new cases will be Paget's Disease. A case report of Paget's Disease of the male breast will be presented as well as a review of the literature.

Case Report

A 65 year old white male presented to the VA Medical Center with a crusted, eczematoid right areolar skin lesion, associated serosanguinous nipple discharge, and an underlying breast mass. He first noticed the mass seven years previously when he had an episode of bloody nipple discharge. His physician aspirated fluid from the mass and nothing further was done. He experienced no further problems until 2 months prior to admission when he noticed the skin lesion and the discharge. He was unaware of the initial size of the mass or any interval change. His sister died of breast cancer at age 65.

Physical exam showed normal male habitus and was otherwise unremarkable except for an ulcerated, eczematous right areolar lesion with a 2x3 cm. underlying mass. The nipple was retracted downward and the mass was firm, non-tender, and had limited mobility. A small amount of serosanguinous fluid could be expressed. A 1x1 cm. nodular skin lesion was present about 2 cm. inferomedial to the areola. Finally, palpable lymphadenopathy was present in his right axilla.

A complete laboratory and radiologic exam including a bone scan was normal. Needle aspiration cytology of the mass demonstrated adenocarcinoma. A right radical mastectomy and axillary dissection was performed. The specimen consisted of the right breast with the associated pectoralis muscles and the axillary contents measuring 14 x 8 x 6.5 cm. The

THOMAS J. JOHNSON, B.S.

University of Nebraska Medical Center

CHARLES S. TOMEK, B.S.

University of Nebraska Medical Center

KERRY B. PATTERSON, M.D.

Department of Pathology, Creighton University School of Medicine, St. Joseph Hospital

JOHN F. BUCKLEY, M.D.*

Department of Surgery

University of Nebraska Medical Center

Veterans Administration Medical Center

circumferential areolar tissue around the nipple was depressed and over the nipple was a raised, weeping, eczematoid lesion. The subareolar breast tissue adjacent to the nipple lesion was indurated and a cut section revealed small foci of gray-white tumor. A tumor mass consisting of firm, yellow-white tissue was seen infiltrating into the surrounding adipose tissue and measured 4 cm. in greatest diameter (Fig 1). The tumor did not infiltrate into the underlying pectoralis major muscle. Six of twelve sampled lymph nodes from the axillary tail were found to contain tumor. All quadrants of the specimen showed varying degrees of involvement by tumor arranged in small nests and cords. The malignant cells have a high nuclear/cytoplasm ratio and possess enlarged ovoid hyperchromatic nuclei with finely dispersed chromatin and prominent acidophilic nucleoli. The tumor extended into the papillary dermis. Individual malignant cells invade epidermis of the nipple. The Paget cells possess abundant clear cytoplasm and the chromatin distribution of the nuclei is more diffuse with peripheralization of the chromatin at the nuclear rim. These cells extend to the stratum corneum (Fig. 2). The carcinoma within the involved lymph nodes showed similar histologic features to that described in the dermal tissue. The inferior skin lesion proved to be a satel-

For reprints: John F. Buckley, M.D., 301 So. 70th St., #340, Lincoln, NE 68510.

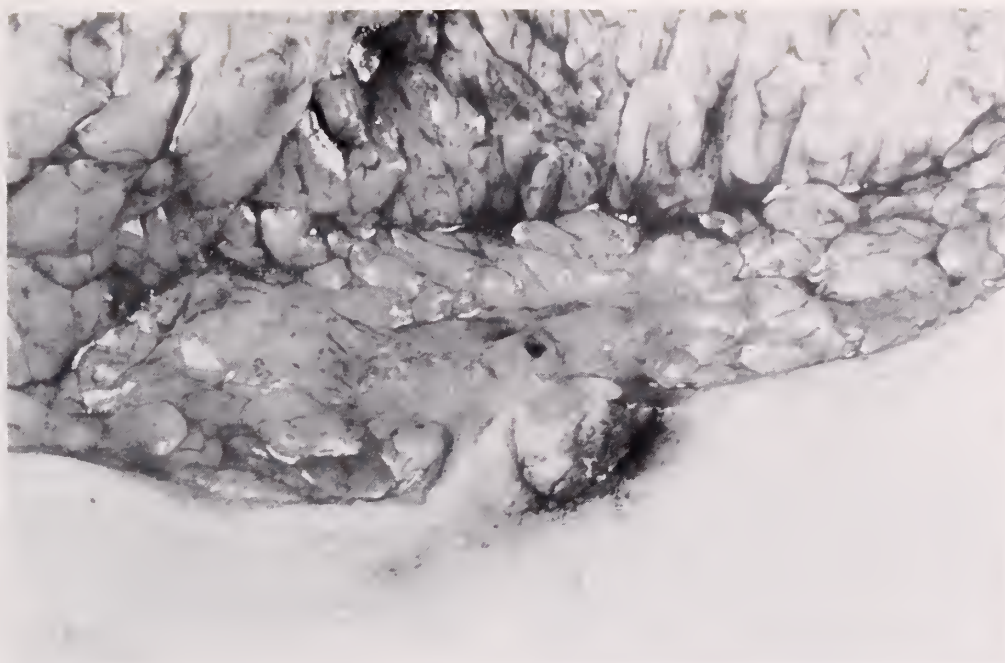


Figure 1
Subareolar tumor causing nipple retraction

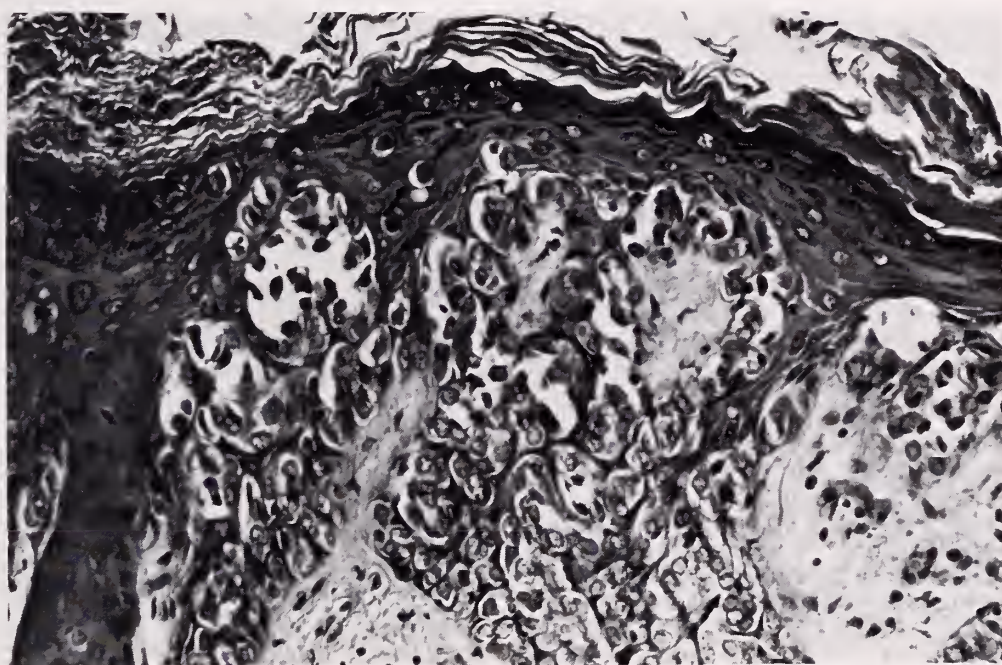


Figure 2
Microscopic photograph of nipple with arrows pointing to typical Paget cell.

lite metastasis. The tumor was estrogen receptor positive (109 fm/mg cytosol protein; $> 10 =$ positive, but progesterone receptor negative (0 fm/mg cytosol protein; $> 20 =$ positive). He received 5,000 rads of adjuvant external beam radiation and remains free of disease at seven months.

Discussion

Male breast cancer accounts for 0.38-1.5% of all cancer in men and less than 1% of all cases of breast cancer.⁴ Although Paget's Disease accounts for 3% of all female breast cancer, the relative frequency in males ranges from 1.5%⁵ to 16%.⁶

The characteristic pagetoid cell seen with H&E staining is large with a pale vacuolated cytoplasm and large hyperchromatic vacuolated nuclei. These cells are present in the epidermis, usually with an underlying adenocarcinoma that is most commonly infiltrating ductal. Although some favor an intraepidermal origin for the cells,⁷ the prevailing view is that they arise in the vestigial ductular tissue then migrate through the lactiferous ducts of the breast to the epidermis where they are responsible for the characteristic nipple and areolar skin changes.⁸

When the characteristic cells are seen in the epidermis two other lesions should be considered: malignant melanoma and intraepithelial squamous cell carcinoma (Bowen's disease).⁹ Special stains such as aldehyde fuchsin and stains for mucin are positive in Paget's Disease but not in either of the other two. The typical pagetoid may also be seen on histological examination of pre-cancerous marginated skin plaques usually in the axilla or anogenital area. This is extra-mammary Paget's disease of the skin and it may be a marker for rectal, gynecologic, or mammary tumors.¹⁰

Paget's Disease of the male breast generally presents as an ulcerated, excoriated lesion of the areola and nipple complex and may be present for years before an underlying mass is detected.⁹ Risk factors are not clearly defined for Paget's Disease specifically, although Klinefelter's Syndrome,¹¹ prior radiation exposure,¹² as well as rare familial distribution¹³ have all been implicated with the development of male breast cancer in general. Available data suggests that hormones, especially estrogen, could be a factor in cancer development but the mechanism remains elusive.¹² No conclusive relationship exists with gynecomastia.¹⁴ The average age at diagnosis is sixty years and the mean duration of symptoms at presentation is 37 weeks.¹⁵

Due to the low incidence and thus difficulty in achieving statistical significance, treatment for Paget's Disease has been the same as for "ordinary" male breast cancer. This, in turn, has paralleled the treatment for female breast cancer. The treatment of choice for stage I and II is mastectomy with axillary dissection. Traditionally, radical mastectomy was performed in order to achieve adequate local and regional tumor control; if the pectoralis muscle

is not involved, a modified radical may be equally effective.¹⁶ More advanced tumors may be treated with simple mastectomy in an attempt to achieve local control or cosmesis.

Although the necessity of adjuvant radiation therapy immediately postoperative for stage II cancers treated by radical or modified radical mastectomy remains controversial, adjuvant radiation is generally recommended for post-operative stage II tumors, if the tumor is over 4 cm. in diameter pathologically even in the absence of positive nodes, and for central lesions.¹⁷

Orchiectomy is the first line treatment for systemic disease achieving response in over 50% of cases.¹⁸ About 90% of male breast cancer will be estrogen receptor positive; consequently, tumor responses to hormonal manipulation are frequent. Recently tamoxifen, an antiestrogen compound, has been shown to be nearly as effective as orchiectomy in achieving remission in metastatic breast cancer but the number treated was small.¹⁹ If a patient does not respond to orchiectomy, he may still respond to adrenalectomy or hypophysectomy.²⁰ Adjuvant chemotherapy has not been particularly valuable but may be beneficial with advanced disease, failure of hormonal manipulation, or availability of a protocol. The response rate is low.

The prognosis for Paget's Disease is difficult to determine because of the small number of cases. In general it is felt to be worse than "ordinary" male breast cancer and its counterpart in females.¹⁵ Satiani provided follow-up for 16 of 23 cases collected from the literature and noted only 4 (25%) 5 year survivors. None had axillary involvement and 3 were free of disease.¹⁵ Crichlow provided follow-up in 8 of 13 cases and noted that the longest survivor of 5½ years not only had no axillary involvement but had no underlying mass.²¹

Summary

Paget's Disease of the male breast is a very rare and malignant disease. The physician should have a high index of suspicion when seeing males with nipple lesions. An eczematous lesion of the male areola or nipple, especially if associated with an underlying breast mass, needs an immediate biopsy. Treatment is similar to that for "ordinary" male breast cancer and seems to be evolving

away from radical mastectomy for earlier disease. Although the prognosis is worse than for male breast cancer in general, the outlook is improved in the absence of axillary involvement or an underlying breast mass.

References

1. Paget J: On Diseases of the Mammary Areola Preceding Cancer of the Mammary Gland. *St. Bartholomew Hosp. Rev* 10:87-89, 1874.
2. Darier MJ: Sur Une Nouvelle Forme de Psorose Cutanee: La Maladie de Paget du Mamelon. *C R Soc Biol* 41:294-298, 1889.
3. American Cancer Society: Cancer Statistics, 1986. *CA-A Cancer Journal for Clinicians*. 36:1, 1-2/1986, pp 9-25.
4. Cutler SJ, Young JL (eds): Third National Cancer Survey: Incidence Data. US Dept of HEW, p 18, 1975.
5. Treves N: Paget's Disease of the Male Mamma: A Report on Two Cases. *Cancer* 7:325-330, 1954.
6. Coley GM, Kuehn PG: Paget's Disease of the Male Breast. *Am J Surg*, 123:444-450, 1972.
7. Lagios MD, et al: Paget's Disease of the Nipple: Alternative Management in Cases without or with Minimal Extent of Underlying Breast Carcinoma. *Cancer* 54:545-551, 1984.
8. Muir R: Further Observations on Paget's Disease of the Nipple. *J Pathol Bacteriol* 49:299-312, 1939.
9. Nehme AE: Paget's Disease of the Male Breast: A Collective Review and Case Report. *Am Surg* 42:289-294, 1976.
10. Shaw A: Paget's Diseases. *The Practitioner* 224:1350, 1980, pp 1323-7.
11. Harnden DG, et al: Carcinoma of the Male Breast and Klinefelter's Syndrome. *J Med Genet* 8:460-1, 1971.
12. Crichlow RW: Carcinoma of the Male Breast. *S.G.&O* 134:1011-1019, 1972.
13. Everson RB, et al: Familial Breast Cancer. *Lancet* 1: 9-12, 1976.
14. Heller KS, et al: Male Breast Cancer: A clinicopathologic Study of 97 Cases. *Ann Surg* 188:60-65, 1978.
15. Satiani S, et al: Paget's Disease of the Male Breast. *Arch Surg* 112:587-592, 1977.
16. Hodson: Male Breast Cancer. *Am Surg* 51:47-49, 1983.
17. Roswit B: Carcinoma of the Male Breast: A Thirty Year Experience and Review of the Literature. *J Rad Onc Biol Phys* 4:711-715, 1978.
18. Neifeld JP: Role of Orchiectomy in the Management of Advanced Male Breast Cancer. *Cancer* 37:992-995, 1976.
19. Ribero G: Male Breast Carcinoma: A review of 301 cases from the Christie Hosp & Holt Radium Inst, Manchester. *Br J Cancer*, 51:115-119, 1985.
20. Crichlow RW: Breast Cancer in Men. *Sem Oncol* 1:2, 145-151, 1974.
21. Crichlow RW: Paget's Disease of the Male Breast. *Cancer* 24:1033-1040, 1969.

Biopsy of Mammographically Suspicious Breast Lesions

IT recently appears that cost containment and the early detection of cancer may be incompatible goals. However, one area that deserves aggressive screening is breast cancer. Finding and eradicating early breast cancer is a reasonable objective with the aid of mammography. The expense and morbidity of breast biopsy must be weighed against the ability of mammography to detect a non-palpable malignant or at least premalignant lesion. Breast screening centers that have aggressively sought out signs of minimal breast cancer have accepted a yield of one cancer for every ten biopsies performed. (1) The purpose of this retrospective study was to determine if our incidence of malignant or atypical lesions was consistent with that found in the literature.

Patients and Methods

From January 1983 to March 1986, 91 consecutive, mammographically suspicious lesions were biopsied in 88 different women. Their ages ranged from 29 to 75 years. These were all nonpalpable lesions.

Each woman had routine mammography consisting of medial-lateral and cranial-caudal views. The exam was carried out using the Xerox 120 and 125 system. Some of our later lesions were identified with the portable screen/film system. All mammograms in this study were interpreted by any of the three radiologists at our hospital. The degree of suspicion was determined by the radiologists. A suspicious lesion was generally a microcalcification cluster or an irregular mass density without calcifications.

The straight needle technique was used to localize the lesion in the mammography suite. The needle was then covered with sterile gauze and taped securely to the skin. Immediately before the biopsy, a small amount of methylene blue dye was injected through the needle in most of these cases. Radiography of the specimen was done to confirm accuracy of the biopsy if calcifications were present. General or local anesthesia was used depending upon location of the lesion and size of the breast.

TIMOTHY P. O'HOLLERAN, M.D., F.A.C.S.*

JOHN D. O'HOLLERAN, MEDICAL STUDENT 4

Great Plains Regional Medical Center, North Platte, Nebraska

Results

Carcinoma was found in 12 of the 91 (13%) biopsy specimens. There were various pathologic types of malignancy. They included infiltrating ductal carcinoma, lobular carcinoma, comedocarcinoma and tubular adenocarcinoma. One of the biopsies revealed carcinoma in situ.

Atypical hyperplasia was found in 10 specimens (11%) and moderate hyperplasia or papillomatosis in 11 (12%). The remaining biopsies showed benign fibrocystic disease, fibroadenoma or benign breast tissue. There were no major complications from either the needle localization or the surgical biopsy.

Discussion

To most effectively cure a patient of breast cancer, the lesion must be found early. In a large study by Patchefsky, detection of non-palpable breast cancer resulted in a statistically improved prognosis over removal of palpable malignancy.² Mammography is currently the only procedure that can consistently detect occult breast lesions.³

A common problem is how to deal with the information found with mammography. Moskowitz has stated that once a mammogram is obtained, it is the responsibility of the radiologist to seek out indirect signs of minimal breast cancer and indicate how strongly these signs are associated with an underlying carcinoma.⁴

Many studies have shown that mammographic needle localization of the occult lesion is the method of choice to assure a proper biopsy.⁵ This assures accurate biopsy of the suspicious area and decreases cosmetic de-

*Reprint Requests: Timothy P. O'Holleran, M.D., 516 West Leota, North Platte, NE 69101.

formity of the breast by allowing smaller amounts of tissue to be removed. The hooked wire technique is popular in many centers. We have been using the straight needle technique for several reasons. The hooked wire is fairly expensive and more prone to being cut during the biopsy. The open straight needle allows injection of methylene blue dye through its lumen. We use a very small amount (usually 0.2cc) and inject immediately before prepping the breast in surgery. This prevents diffusion of the dye throughout large areas of breast tissue. Our radiology technicians have been very successful in securing the needle with a sterile dressing. We have not had a problem with needle movement or post-operative infection. If calcifications are present, specimen radiography confirms accuracy of the biopsy while the patient is still on the operating table.

Carcinoma was found in 13% of our biopsy specimens. Twenty-three percent of the specimens showed atypical hyperplasia, moderate hyperplasia or papillomatosis. We consider this group to be pre-malignant in accordance with the consensus meeting of the cancer committee of the College of American Pathologists.⁶

Colbassani has shown that careful study of microcalcification clusters on mammograms did not show significant differences between the malignant and benign group. Therefore, they were not helpful in predicting the nature of the lesion. He has stated that all patients with isolated microcalcification clusters on mammography should have a localization biopsy.⁷

Breast screening centers that have aggressively sought out signs of minimal breast cancer have accepted a yield of one cancer for every ten biopsies performed for nonpalpable lesions picked up on mammogram.¹ Lefor, et. al. had an incidence of 17% malignancy.⁵ Siemmsen and co-workers in a study of 100 patients with occult lesions showed a 16% incidence of malignancy.⁷ Our incidence of

13% malignancy and 23% pre-malignancy is certainly in line with other studies and perhaps not aggressive enough according to Moskowitz.⁴ He argues that the aggressive approach may be costly. But if we do not have the desire to carry out effective screening, then it is better that no screening at all be performed. Screening provides certain radiographic criteria which do not guarantee absolute diagnosis but do substantially increase the number of early cancers detected.

Summary

A retrospective review was done on 91 consecutive breast biopsies for nonpalpable, mammographically suspicious lesions. Pre-operative needle localization was used to identify the area to biopsy. A 13% incidence of malignancy was found, and 23% of the lesions were worrisome enough to be considered premalignant. Our study supports the belief that an aggressive approach is indicated for nonpalpable, suspicious lesions identified on mammography.

References

1. Fox SH, Moskowitz M, Saenger EL, et al: Benefit/risk analysis of aggressive Mammographic Screening. *Radiology* 128:359-365. Aug. 1978.
2. Patchefsky A, Shaber B, Schwartz G, Feig S, Nerlinger R: The pathology of breast Cancer detected by mass population screening. *Cancer* 40:1659-70. 1977
3. Snyder R: Specimen radiography and preoperative localization of nonpalpable breast cancer. *Cancer* 46:950-6. 1980
4. Moskowitz M: Screening is not diagnosis. *Radiology* 133:265-8, Oct. 1979
5. Lefor AT, Niumman PJ, Levinschm EM: Needle localization of occult breast lesions. *Am J Surg* 148:270-4. Aug. 1984
6. Consensus Meeting, October 1985, Cancer Comm. American College of Pathologists: *Arch Pathol Lab Med* 110:171-3. Mar. 1986
7. Colbassani HJ, Feller WF, Cigtay OS, Chum B: Mammographic and Pathologic Correlation of Microcalcification in Disease of the breast. *SG&O* 155:690-6. Nov. 1982
8. Siemmsen O, Blichert-Taft M, Pedersen M, Olesen K, Jensen C, Jacobsen G: Mammography directed wire marking of nonpalpable breast lesions. *Acta Chir Scand* 147:525-7. 1981

PERINATAL PAGE

Neonatal Jaundice: Current Concepts

Neonatal jaundice remains a frequent clinical diagnosis and management problem. Nearly 50% of term infants become visibly jaundiced with up to 10% requiring phototherapy. Bilirubin encephalopathy is a decreasing but ever present problem.¹ This report reviews the current clinical management of the jaundiced neonate.

Clinical jaundice appears in the term infant when serum levels reach 5-7mgm%. Physiologic jaundice in the term infant is defined as a serum level of 12mgm% within the first three days of life or a rate of rise in the serum level which is equal to or less than 5mgm% per day and does not exceed 12mgm%. When clinical jaundice is present on the first day or levels exceed the 12mgm% level, then further clinical and laboratory investigation is required.

Diagnosis

Minimal investigation should include a history for coexisting perinatal problems including maternal diabetes, intrauterine growth retardation, premature delivery, twin-twin transfusion, intrauterine infection, confined space bleeding or bruising such as cephalohematoma or intracranial hemorrhage. Laboratory evaluation should include a bilirubin direct and total, a hematocrit, a peripheral smear, and a direct Coomb's test if the mother is Rh negative. If the mother is group O, an indirect Coomb's test for ABO incompatibility is recommended. If the maternal irregular antibody screen is positive, and she is Rh positive, then a type and direct Coomb's on the infant for Kell, Duffy or other irregular antibodies may be necessary. If there is an elevation in the direct fraction, evaluation for sepsis, either viral or bacterial, or hepatocellular disease is indicated. If the jaundice is prolonged in bottle fed infants, studies of thyroid function and other metabolic causes of jaundice may be required. Serial bilirubin determinations will need to be performed to monitor the state of the jaundice. We recommend daily follow up unless the rate of rise exceeds 0.5mgm% per hour, then more

DAVID L. BOLAM, M.D.*

ROBERT M. NELSON, JR., M.D.

Department of Pediatrics

University of Nebraska Medical Center

frequent testing is indicated. Testing can be eliminated when the level is well below treatment thresholds. Important in the evaluation of the infant with jaundice is actual physical examination. Laboratory inaccuracies do not remove any responsibility from the practicing physician.

Treatment

Two principal methods of clinical management are available to the physician. Phototherapy is widely used to prevent bilirubin levels from achieving heights requiring exchange transfusion. Phototherapy acts by photoisomerization of indirect bilirubin to more water soluble isomers which can be excreted through the urinary tract. Phototherapy has several side effects which require careful monitoring. It raises skin temperature, reduces peripheral vascular resistance and increases insensible water loss. There is some evidence that it also causes a transient GI lactase deficiency and increases stool water loss. Exchange transfusion should be considered when the serum bilirubin has reached 20mgm% in a term infant. This level is not sacred, however, and lower levels of bilirubin may cause subtle sensorineural changes, especially in low birth weight infants. In a recent study of preterm infants of 1500 grams birthweight or less, sensorineural deafness was present in a large proportion of patients, particularly if concomitant acidosis was pre-

*Reprint Request: David L. Bolam, M.D., Department of Pediatrics, University of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, Nebraska 68105.

sent.² We initiate phototherapy when the serum bilirubin level is within 5mg% of the level for exchange transfusion, no matter what the etiology of the bilirubin rise. If there are associated risk factors, such as prematurity, hypoxia, asphyxia, and acidosis, we reduce the exchange level by 5mgm% for each major risk factor. Phototherapy treatment levels are also appropriately reduced. Phototherapy may be carried out in the home, in the otherwise stable term infant without significant anemia or evidence of infection, if all the appropriate safeguards are met. Immediate exchange transfusion may be necessary in the term infant with hemolytic disease, not only to correct the bilirubin excess, but also to correct a significant anemia. Exchange transfusion may also be necessary in any infant whose bilirubin level exceeds 20mgm%, no matter what the etiology. Correction of associated dehydration and other parameters may be necessary before exchange transfusion is initiated. If the bilirubin has declined to a level below 20mgm%, while awaiting blood availability for exchange and correction of dehydration, then the exchange transfusion can be deferred. Because of the declining incidence of erythroblastosis, the number of physicians comfortable with exchange transfusion has decreased. Referral to a regional level II or level III Newborn ICU is reasonable. If protracted clinical jaundice is present in term breast fed infants, discontinuing breast feeding for 24-48 hours may be necessary both therapeutically and diagnostically.

Risk

Bilirubin encephalopathy is still poorly understood in terms of what maximum level, for what given duration can lead to kernicterus. Kernicterus can lead to sensorineural deficits including hearing loss, cerebral palsy and mental retardation. Subtle effects such as

minimal cerebral dysfunction and slightly impaired motor function are possible.³

Early Discharge

With the tendency toward early discharge at 24 hours, it is important that early follow-up be arranged. A return visit at 2-4 days to the physician's office or home visit by a physician or nurse is needed to detect those infants who may later develop high bilirubin levels or other medical problems.

TABLE 1.

Healthy Term Infant	Phototherapy Level	Exchange Transfusion Level
	15	20
Preterm Infant		
1,500 - 2,250 gms.	10 - 12	15
1,000 - 1,500 gms.	8 - 10	12 - 14
less than 1,000 gms.	6 - 8	9 - 12

Summary

Simple guidelines for evaluation and treatment of the jaundiced neonate have been presented. More research into the relationships that lead to bilirubin encephalopathy are necessary. Careful attention to the presence of clinical jaundice and early institution of the appropriate therapy are necessary to reduce the risk of bilirubin encephalopathy and its permanent dangers.

References

1. De Vries LS, Lary S, and Dubowitz LMS: Relationship of Serum Bilirubin Levels to Ototoxicity and Deafness in High-Risk Low-Birth-Weight Infants. *Pediatr* 76(3):351-354, 1985.
2. Eggert LD, Rodney AP, Folland DS, and Jung AL: Home Phototherapy Treatment of Neonatal Jaundice. *Pediatr* 76(4):579-584, 1985.
3. Sarnat M: Neonatal Bilirubin Encephalopathy. **Topics in Neonatal Neurology**, Grune & Stratton, pp. 109-136, 1984.

President's Page

The Medicare Program, as it is now structured, faces serious solvency problems, and unless significant changes are instituted, is headed for bankruptcy. Recent estimates by Health & Human Services Secretary, Dr. Bowen, indicate that by the late 1990's, the Part A trust fund will be totally exhausted, and it will be one trillion dollars in debt by 2010. The pay-as-you-go system creates an inter-generational transfer of resources that is adversely affected by the deteriorating worker to beneficiary ratio. Statistics show that for the first time in the history of our country, we have more people over the age of 55 years than we have under the age of 25 years. We now have four workers paying taxes to support each beneficiary, but by the middle of the next century, there will be only two workers for each beneficiary.

The A.M.A. Board of Trustees has presented a program, developed by the Council on Medical Service and the Council on Legislation, for financing health care of the elderly. Their proposal, that will be outlined in this message, represents a new approach for financing health care of the elderly with elements that of course can, and probably will be altered to some extent when broadly discussed and debated.

The proposal provides catastrophic protection and equitable means testing with out of pocket spending limits for most beneficiaries set at \$2500/year for individuals and \$3,750/year for a husband and wife. The limits are reached by combining a uniform co-insurance limit with a deductible that varies in relation to individual or family income.

There would be a gradual increase in age of eligibility for benefits under the new program from 65 years to 67 years, at the rate of three months per year.

The new program would be financed by eliminating the current 1.45 percent payroll tax on employees and replacing it with an initial tax of 1.75 percent on adjusted gross income up to \$100,000. There would be a net increase of 0.3 percentage point in the tax obligation of about 95 percent of individuals. The payroll tax on employers would be continued, with a modest (less than 1 percent-



Hiram R. Walker, M.D.

age point) increase in the current 1.75 percent rate. The initial tax rates for both employers and individuals are slightly higher than existing rates under the Medicare Program, however, the future rates for the new program are considerably less than those combined payroll and general revenue taxes (and Part B premium costs) which would be needed in the future to fund the current Medicare Program on a fiscally sound basis.

The proposal allows for additional significant contributions to IRA's (\$500/individual and \$1,000/husband and wife), and for tax-free withdrawals from such IRA's for health expenses after reaching eligibility age.

Each eligible individual would receive an annual voucher for the purchase of an adequate benefits policy from an approved insurance carrier or other health plan.

The above proposals are from the report MM of the A.M.A. Board of Trustees, and give only a brief outline of the total report. I would suggest that anyone interested in more complete information obtain a copy of the report.

The present Medicare Program is in serious trouble financially, and we are fortunate to have the leadership in our profession with the foresight and ability to come up with a fiscally and actuarially sound financing approach for the Medicare Program. Support of a reasonable and prudent fiscal approach to the Medicare problems by all interested physicians through their congressional delegations should be helpful.

Hiram R. Walker, M.D., President

University of Nebraska Medical Center News

FIRST BASIC SCIENCES PROFESSORSHIP ESTABLISHED AT UNMC

The first professorship to recognize basic sciences research at the University of Nebraska Medical Center has been established in honor of a long-time faculty member and department chairman at the campus.

The initiation of the J.P. Gilmore Distinguished Professorship Award in the Basic Sciences was announced recently by the University of Nebraska Foundation and the College of Medicine.

The namesake of the award is also its first recipient — Dr. Joseph Gilmore, who has been professor and chairman of the College of Medicine's department of physiology since 1970.

"Dr. Gilmore exemplifies the progress that has been made in basic sciences research at this institution during the past few years," said Dr. Robert Waldman, dean of the medical college. "So it is most appropriate that the award not only be named after him, but also given to him as its first recipient."

Dr. Waldman said the award will be given every five years to a faculty member in one of the college's basic science departments who has demonstrated excellence and productivity in research. It is expected that the award, which is being established from a privately-funded endowment will provide a five-year stipend, with most of those funds being used by the faculty member to further basic science research endeavors.

"When compared to clinical research," Dr. Waldman noted, "basic science research gets

little attention since it is two or three steps removed from direct health care. But without basic sciences research, we would not have most of the advances in health care and medical education from which we benefit today."

Dr. Waldman said Dr. Gilmore's work reflects this last statement. Many of Dr. Gilmore's 180 publications in professional books and journals have focused on physiologic problems and activities of the heart and kidneys. He also has written a book entitled "Renal Physiology."

His research has led to a better understanding of various forms of chronic heart disease and the body's mechanisms for fluid balance and excretion. His latest research concerns the effects of nicotine and alcohol on the heart and cardiovascular system.

Dr. Gilmore has been previously recognized for his research. Last year, he received the campus' A. Ross McIntyre Award for excellence in research, and in 1979 he received the University of Nebraska Award for Outstanding Research and Creativity.

He is a former recipient of the prestigious Research Career Development Award from the National Institutes of Health.

Before joining the Medical Center in 1970, he was professor of physiology at the University of Virginia Medical School. He also served as acting chief of Laboratory of Cardiovascular Physiology at the National Heart Institute.



The Auxiliary

Happy New Year!!! Hope your holiday season was happy and healthy.

Thank you all for your hospitality, enthusiasm and friendship, when we visited the county auxiliaries and members-at-large meetings. It has been a very rewarding year for me to have the chance to meet each of you and get acquainted. I have been very impressed at all of your events and activities and especially all you do for your community.

I found this column from Erma Bombeck several years ago. It seems to fit our Auxilians as well as all volunteers.

"Volunteers are like yachts. No matter where they are, they arouse your curiosity. Who are they? Where do they come from?"

They could stay moored where its safe and still, justify their being, but they choose to cut through the rough waters, ride out storms and take chances.

They have style. They're fiercely independent. If you have to ask how much they cost, you can't afford them.

Volunteers and yachts have a lot more in common these days. They're both a part of an aristocratic era that is disappearing from the American scene. They're both a luxury in a world that has become very practical.

Volunteers don't just contribute to our civilization — they are civilization — at least the only part worth talking about.

They are the only human beings on the face of the earth who reflect this nation's compassion, unselfishness, caring, patience, need and just plain loving one another. Their very presence, transcends politics, religion, ethnic background, marital status, sexism, even smokers vs. non-smokers.

Maybe like the yacht the volunteer is a luxury, and luxuries are often taken for granted.

One has to wonder. Did we as a nation remember to say to the volunteers "Thank You for the symphony hall. Thank you for the six dialysis machines. Thank you for sitting up with a 16 year old who overdoses and begs to die. Thank you for the hot chocolate at the scout meeting. Thanks for reading to the blind. Thanks for using your station wagon to transport a group of strangers to a ball game. Thanks for knocking on doors in the rain. Thanks for hugging the winners of the Special Olympics. Thanks for pushing the wheelchair in the sun. Thanks for being.

Did the media stand behind them when they needed a boost? Did anyone make it a point to tell them they did a good job? Did the recipients of their time and talent ever express their gratitude?

It frightens me, somehow, to imagine what the world would be like without them."

I would like to congratulate all of the Auxilians that worked in political campaigns this fall. It is one of the most important things we can do to aid our physician spouses. Keep up the good work and invite a friend.

Don't forget about the Legislative Day the end of January and the Mid Winter Meeting at the Villager Motel, 5200 "O" Street, Lincoln on Frebruary 18, 1987. The program will start at 10:00 a.m. and business meeting at 1:00 p.m. Our program will be: Dr. Robert Shapiro will talk about PAC and Linda Brown is planning a health project skit. It will be very interesting. **ALL MEMBERS ARE INVITED TO ATTEND.**

Remember Dues are due!!!!!! Our year runs from July 1 to June 30. So to receive the most value from your dues, please pay them early.

Bev Kruger
President,

In Memoriam

*By medicine life may be prolong'd
yet death*

Will seize the doctor too.

—Shakespeare

Robert E. Barr, M.D. — (Born in 1920 - died October 22, 1986) Medical Specialty — General Practice. Doctor Barr was a graduate of the University of Nebraska College of Medicine in 1944 and had his general practice in Tilden, Nebraska. He was a member of the Nebraska Medical Association and the American Medical Association. Survivors include his wife, Marge; three sons, Robert E. Barr, II of Bellevue, Charles Curtis Barr of Blair, and John W. Barr of Tilden; seven grandchildren; and one sister, Dorothy Johnston of Yuma, Arizona.

Coming Meetings

UNIVERSITY OF NEBRASKA

7TH ANNUAL MEDICAL & SKI CONFERENCE — "Diagnostic Dilemmas: The Approach and the Answers" — February 15-19, 1987 at the Keystone Conference Center, Keystone, Colorado. Sponsored by the University of Nebraska College of Medicine Department of Internal Medicine. Program is being offered to physicians at the same time that the College of Nursing is offering a nursing ski conference and the College of Dentistry will be offering their annual Dental Ski Conference. Approved for 16 hours of AMA Category I and AAFP prescribed hours. For more information contact Marge Adey, Coordinator of Continuing Medical Education, University of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, Nebraska 68105. Telephone (402) 559-4152.

36TH ANNUAL OB-GYN CONFERENCE — March 12-13, 1987 at the Holiday Inn Central, Omaha, Nebraska. Fee: TBA. Contact Marge Adey, University of Nebraska

Medical Center, Center for Continuing Education, Omaha, Nebraska 68105. (402) 559-4152.

FAMILY PRACTICE REVIEW - A COMPREHENSIVE UPDATE — March 30-April 10, 1987 and April 27-May 8, 1987 at Omaha, Nebraska. Sponsored by the University of Nebraska College of Medicine. Registration Fee: \$850. (One week registration available with special arrangements). Contact: Marge Adey, University of Nebraska Medical Center, Center for Continuing Education, 42nd and Dewey Avenue, Omaha, Nebraska 68105. Phone: (402) 559-4152.

For further information or to register, contact: Marge Adey, Coordinator of Continuing Medical Education, University of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, Nebraska 68105. (402) 559-4152

CREIGHTON UNIVERSITY

CORONARY HEART DISEASE AND HYPERTENSION — Feb. 1-6, 1987 — Freeport, Bahamas. 28 credit hours in Category 1. 28 Prescribed hours A.A.F.P. Registration fee \$375.00 prior to Nov. 1; \$450.00 after Nov. 1, 1986.

PATHOLOGY AND TREATMENT OF ESOPHAGEAL DISORDERS — Feb. 12-17, 1987 — Wyndham Rose Hall Beach Motel, Montego Bay, Jamaica. 24 credit hours in Category 1. Enrollment limited to 20. Registration fee \$475.00.

ADVANCES IN ANTITHROMBOTIC THERAPY — Mar. 14, 1987 — Saint Joseph Hospital, Omaha, Nebraska. Program Director: Syed M. Mohiuddin, M.D.

FLORIDA TUTORIAL (OB-GYN) — Mar. 26-27, 1987, Airport Marriott Hotel, Orlando, Florida, Program Director: Gilles R.G. Monif, M.D.

THE ROLE OF ECHOCARDIOGRAPHY IN THE DIAGNOSIS AND MANAGEMENT OF CARDIAC EMERGENCIES — Apr. 10-11, 1987, Saint Joseph Hospital, Omaha, Nebraska. Program Director: Syed M. Mohiuddin, M.D.

WHAT YOU NEED TO KNOW ABOUT PERINATAL ULTRASOUND — Spring, 1987 — Hours: TBA. Fee: TBA. Omaha, Nebraska.

INFECTIOUS DISEASE SYMPOSIUM — April 15, 1986, Saint Joseph Hospital, Omaha, Nebraska. 6 credit hours Category 1. Fee: TBA.

PEDIATRIC INFECTIOUS DISEASE SYMPOSIUM — May 8-9, 1987, Boys Town Conference Center, Boys Town, Nebraska. Program Director: Dr. Steven Chartrand. 12 credit hours Category 1. Fee: TBA.

MAURICE E. GRIER SYMPOSIUM (OB-GYN) — June 6, 1987, Marriott Hotel, Omaha, Nebraska. Program Director: James W. Daly, M.D.

PERINATOLOGY CONFERENCE — September 25-26, 1987, Omaha, Nebraska, Hours TBA. Fee TBA.

For further information or to register, contact: Creighton University School of Medicine Division of CME, Omaha, NE 68178, 402-280-2550 or outside Nebraska Toll free 800-228-7212, Ext. 2550. The Creighton University School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.

UPCOMING UNMC CONTINUING EDUCATION COURSES

ADVANCED CARDIAC LIFE SUPPORT — Jan. 13-14, 1987 — Initial Certification Omaha, Nebraska. Registration Fee: \$130. 14.5 Hours AMA Category I.

ADVANCED CARDIAC LIFE SUPPORT — Feb. 10, 1987 — Recertification. Omaha, Nebraska. Registration Fee: \$50. 7.2 Hours AMA Category I.

ADVANCED CARDIAC LIFE SUPPORT — Feb. 11, 1987 — Instructor Course. Omaha, Nebraska. Registration Fee: \$60. 6.0 Hours AMA Category I.

ADVANCED CARDIAC LIFE SUPPORT — Mar. 10-11, 1987 — Initial Certification. Omaha, Nebraska. Registration Fee: \$130. 14.5 Hours AMA Category I.

ADVANCED CARDIAC LIFE SUPPORT — Apr. 15, 1987 — Recertification. Omaha, Nebraska. Registration Fee: \$50. 7.2 Hours AMA Category I.

ADVANCED CARDIAC LIFE SUPPORT — May 18-19, 1987 — Initial Certification. Omaha, Nebraska. Registration Fee: \$130. 14.5 Hours AMA Category I.

ADVANCED CARDIAC LIFE SUPPORT — May 20, 1987 — Instructor Course. Omaha, Nebraska. Registration Fee: \$60. 6.0 Hours AMA Category I.

ADVANCED CARDIAC LIFE SUPPORT — June 1, 1987 — Recertification. Omaha, Nebraska. Registration Fee: \$50. 7.2 Hours AMA Category I.

For further information, contact Ann Fitzgerald, University of Nebraska Medical

Center, Center for Continuing Education, 42nd & Dewey Avenue, Omaha, Nebraska 68105-1065. Phone (402) 559-4152. In Nebraska, call: 800-228-1095. All other states (except Alaska), call: 800-228-9630.

NATIONAL JEWISH CENTER FOR IMMUNOLOGY AND RESPIRATORY MEDICINE

TRIBUTE TO HYMAN CHAI, M.D. —

January 10-14. National Jewish Center for Immunology and Respiratory Medicine Keystone Summit at Keystone, Colorado. Topics: Allergy, Asthma, Pharmacology, Advances in Immunology, Diagnostic Testing and more. Fee: \$325. \$165 for Allied Health and Physicians in Training. 15.5 hours of AMA Category 1 Credit. For more information contact: Jeri Wagner, National Jewish Center for Immunology and Respiratory Medicine, 1400 Jackson Street, Denver, CO 80206. 303-398-1000.

UNIVERSITY OF KANSAS

For information concerning the following continuing education offerings sponsored by the University of Kansas Medical Center contact: Carole Rosen, Promotions Coordinator, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Boulevard, Kansas City, KS 66103 (913) 588-4480.

LEGAL MEDICINE: THE NEW SOLUTION

— Jan. 18-24, 1987 — Sponsored by University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, KS 66103. Location: Puerto Vallarta, Mexico. 16 Category I AMA, AAFP credit hours. Contact: Eileen Buttron, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103.

A SPECIAL WORKSHOP ON THE USE OF CO₂ LASER IN ENT SURGERY —

Jan. 30, 31, and Feb. 3, 1986, Apr. 10, 11 and 14, 1986, Sept. 25, 26, and 29, 1986, and Dec. 11, 12, and 15, 1986 (3rd day optional - O.R. instruction). Sponsored by the University of Kansas Medical Center. Located at

Sudler Hall, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, Kansas. 15 hrs. AMA (cat.I), 9 hrs. or .9 American Nurses Association. Fees 2 days \$750 physicians, \$300 nurses; 3 days (includes O.R. instruction) \$900 physicians, \$350 nurses.

INTERNAL MEDICINE SYMPOSIUM —

Mar. 1-7, 1987 — Sponsored by: University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, KS 66103. 18 Category I AMA, AAFP credit hours. Location: Cancun, Mexico. Contact: Eileen Buttron, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103.

COMMON PROBLEMS IN GASTRO-ENTEROLOGY —

Mar. 16, 1987 — Sponsored by: University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, KS 66103. Credit: AMA, AAFP. Location: TBA. Contact: Eileen Buttron, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103.

SAM E. ROBERTS NUTRITION —

Mar. 31, 1987 — University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, KS 66103. Credit: AMA, AAFP, CNE, ADA. Location: Battenfeld Auditorium, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103. Contact: Eileen Buttron, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103.

WHAT'S NEW IN DIABETES —

Apr. 1, 1987 — Sponsor: University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, KS 66103. Credit: AMA, AAFP, CNE, ADA. Location: Battenfeld Auditorium, University of Kansas Medical Center, 39th & Rainbow, Kansas City, KS. Contact: Eileen Buttron, Office of Continuing Education, University of Kansas Medical Center Contact: Eileen Buttron, Office of Con-

tinuing Education, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103. 913/588-4494.

PEDIATRICS — Apr. 2-3, 1987 — Sponsored by the University of Kansas Medical Center. Location: Battenfeld Auditorium, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103. Credit: AMA, AAFP, CNE. Contact: Eileen Buttron, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103.

37TH ANNUAL ANESTHESIOLOGY SYMPOSIUM — Apr. 24-26, 1987 — Sponsored by the University of Kansas Medical Center. Location: Crown Center Hotel, Kansas City, Missouri. Credit: AMA, AAFP, AANA. Contact: Eileen Buttron, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103.

TWELFTH ANNUAL FAMILY PRACTICE SYMPOSIUM — April 29-30, 1987. Sponsor: University of Kansas Medical Center. Location: Crown Center Hotel, Kansas City, Missouri. Credit: AMA, AAFP. Contact: Eileen Buttron, University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103, (913) 588-4494.

ANTICOAGULANT AND ANTITHROMBOTIC THERAPY: STATE OF THE ART — April 25, 1987. Sponsored by the University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow, Kansas City, Kansas 66103. Location: Alameda Plaza Hotel. Credit: Category I AMA, AAFP, CNE. Contact: Eileen Buttron, University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103 (913) 588-4480.

THIRTY-FIRST ANNUAL INFECTIOUS DISEASES SYMPOSIUM — May 1, 1987. Sponsor: University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow, Kansas City, Kansas 66103. Location: Crown Center Hotel. Credit: Category I AMA, AAFP. Contact: Eileen Buttron, University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103, (913) 588-4494.

KANSAS MEDICINE — May 15, 1987 — Sponsor: University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, KS 66103. Credit: AMA and AAFP. Location: Battenfeld Auditorium, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103. Contact: Eileen Buttron, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103. 913/588-4494.

AMA News Notes

Emanuel M. Steindler, a longtime AMA executive, will become the first executive director of the American Medical Society on Alcoholism and Other Drug Dependencies (AMSAODD), it was announced by Max A. Schneider, M.D., AMSAODD president.

Steindler, who is leaving the AMA at the end of the year, will establish an AMSAODD office in the Chicago area. He will manage the activities of the 2,400 member organization, which is composed of physicians involved in the prevention and treatment of alcoholism and other addictive disease.

Steindler joined the AMA staff in 1962 as assistant program director of the AMA Education and Research Foundation. He became assistant director, and then director, of the Dept. of Mental Health and acting director of the Dept. of Substance Abuse. Earlier this year he was elected to the board of directors of the National Council on Alcoholism.

* * *

Quality of Life award from American Lung Assn. and New York Lung Assn. was presented to Harrison L. Rogers Jr., M.D., AMA's immediate past president, at an awards luncheon in New York. Also honored was Charles F. Tate Jr., M.D., professor emeritus of medicine and pulmonary diseases at the U. of Miami Medical School.

* * *

More than 300 physicians and other experts on radiation hazards attended the AMA-sponsored International Conference on Non-Military Radiation Emergencies last month in Washington, D.C.

Speakers at the conference addressed problems and duties of the medical community in the nuclear age, including such topics as risk estimates for radiation emergencies, emergency planning for hospitals and the public, evacuation procedures, prophylactic medical care, networking of emergency information, and dealing with public anxiety and fear.

* * *

Services of the AMA's Market Area Profile (MAP) program are available to physicians just entering practice or those who wish to re-establish in another region.

The service also can assist physicians attempting to build more efficient practices in their current locations, since it provides demographic information about the residents of the area, their medical needs, and their accessibility to various medical services. MAP data allow physicians to determine the potential practice base in given area, and to plan accordingly for the future.

The MAP reports, provided on a subscriber basis, include data on patient population, age, and income; physician manpower data, by specialty, age, and professional activity; and local hospital data, including information about specific facilities and utilization of services, size of medical staff, and other information.

Details about the program are available by calling (800) 826-6895.

* * *

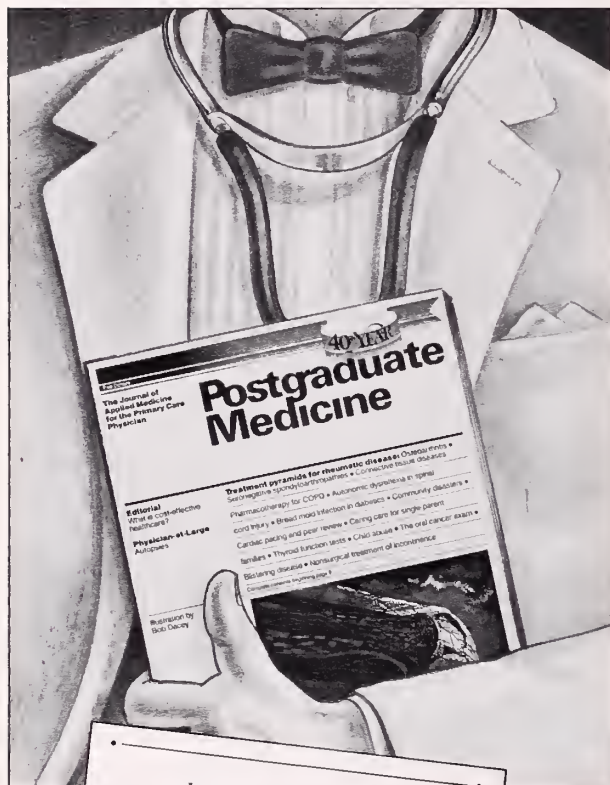
The AMA's Division of Basic Science and National Institutes of Health will co-sponsor a symposium, "Challenges to Biomedical Research; Framework for Decision-Making," Feb. 16 in Chicago, during the annual meeting of the American Assn. for the Advancement of Science.

The program is an outgrowth of the AMA's Health Policy Agenda for the American People project and will offer participants the opportunity to hear the views of leaders in biomedical research and to offer comments on proposals intended to guide the future of medical science.

Interested physicians and other scientists are invited. Details about the meeting are available from R. Mark Evans, PhD, Division of Basic Science, AMA, 535 N. Dearborn, Chicago, Ill. 60610; (312) 645-4567.

* * *

FAMOUS PHYSICIANS ARE SHOWING UP FOR OUR 40th YEAR CELEBRATION.



Joseph B. Kirsner, M.D.
Donald E. DeWitt, M.D.
W. Jack Stelmach, M.D.
Robert E. Rosenthal, M.D.
James D. Mills, M.D.
Thomas J. McDonald, M.D.

Read Every Issue From Cover to Cover:

January		
Symposium: Biliary Tract Disease		
Special Article: Gastroenterology 1947-1987		Joseph B. Kirsner, M.D.
February 1		
Symposium: Focus on Family Practice		Donald E. DeWitt, M.D. coordinator
Special Article: Family Practice 1947-1987		W. Jack Stelmach, M.D.
February 15		
Symposium: Emergency Medicine		Robert E. Rosenthal, M.D. coordinator
Special Article: Emergency Medicine 1947-1987		James D. Mills, M.D.
March		
Symposium: Otolaryngology in Primary Care		Thomas J. McDonald, M.D. coordinator
Special Article: Otolaryngology 1947-1987		Thomas J. McDonald, M.D.

40-YEAR Postgraduate Medicine

Every Issue is a Celebration of Clinical Information

10-A The Nebraska Medical Journal January 1987

AMA News Notes

AMA lobbyists are sampling the Capitol Hill mood on physician reimbursement. They report that Senate aids think that Congress will continue to tinker around the edges a bit before undertaking a major restructuring of Medicare on a fee-schedule basis. If and when a program revamping occurs, battle lines will be drawn on whether physicians will be allowed to bill beyond the basic fee.

* * *

Scholarships in clinical nutrition have been awarded by the AMA Education and Research Foundation to third- and fourth-year medical students. The program consists of four- to six-week clerkships in general, pediatric, and surgical nutrition offered by 22 medical schools across the country. The nine students accepted into this year's program will receive a \$700 award to defray their living and traveling costs.

* * *

AMA membership continues to exceed goals for 1986. All three dues-paying categories are ahead of last year's figure by a total of 10,319 as of the end of November. Dues-paying membership on that date totaled 239,695. There are 4,810 more regular members, largely because of the three newly unified states (Kansas, Mississippi, and Virginia), which have contributed 3,258 more members than last year.

In addition, California reported 322 more regular members than on Nov. 5, 1985, and Illinois is up more than 290 members during the same period. Furthermore, 755 physicians older than age of 70 paid dues this year. In 1985, these physicians were still dues exempt.

The student and resident categories are significantly ahead, mainly as a result of direct recruitment efforts. There are 2,190 more direct paid residents and 2,583 more direct paid students than last year.

Overall, dues-paying membership totals are running 101.7% over goals for the year.

* * *

ORGANIZATIONS, STATE

- American Cancer Society, Nebraska Division, Inc.**
Don W. McClure, Exec. Vice President
8502 West Center Rd., P.O. Box 241255, Omaha 68124-5255
- American Diabetes Association — Nebraska Affiliate, Inc.**
Ron Van Ryswyk, Executive Director
7377 Pacific St., Ste. 216A, Omaha 68114
- American Heart Association, Nebraska Affiliate**
Dennis N. Nissen, Executive Director
3624 Farnam St., Omaha 68131
- American Lung Association of Nebraska**
8901 Indian Hills Dr., Ste. 107, Omaha 68114
- American Red Cross**
P.O. Box 83267
1701 "E" St., Lincoln 68501
- Arthritis Foundation, Nebraska Chapter, Inc.**
Mrs. Ellen Wright, Exec. Director
2229 N. 91st Court, Omaha 68134
- Blue Cross and Blue Shield of Nebraska**
Wm. H. Heavey, President
P.O. Box 3248, Main Station, Omaha 68180
- Creighton University School of Medicine**
Richard O'Brien, M.D., Dean
California at 24th St., Omaha 68178
- Cystic Fibrosis Foundation, Nebraska Chapter**
Charles R. Bercaw, Exec. Director
5017 Leavenworth St., Omaha 68106
- Dairy Council of Central States, Inc.**
Suite 103, Hillcrest Bldg.
76th & Main, Ralston 68127
- Division of Rehabilitation Services**
Nebraska Department of Education
6th Floor, 301 Centennial Mall South, Lincoln 68509
- Division of Rehabilitation Services for the Visually Impaired**
James S. Nyman, Ph.D., Director
4600 Valley Road, Lincoln 68510
- Easter Seal Society of Nebraska**
Mrs. Letitia K. Simmons, Executive Director
3015 North 90th St., #6, Omaha 68134
- Health Manpower Referral Service, State of Nebraska**
3rd Floor, State Office, 301 Centennial Mall South, Lincoln 68509
- Lincoln Council on Alcoholism and Drugs, Inc.**
Room 212, 215 Centennial Mall, Lincoln 68508
- March of Dimes — Birth Defects Foundation**
1618 L Street, Lincoln 68508
- MID-PLAINS POISON CONTROL CENTER**
Childrens Memorial Hospital, 8301 Dodge St., Omaha 68114
(402) 390-5400 or 800-642-9999 (toll free Nebraska)
- Missouri Valley Dermatologic Society**
Richard Q. Crotty, M.D., Secretary
7822 Davenport St., Omaha 68114
- Muscular Dystrophy Association**
1912 No. 90th St., Lower Level, Omaha 68114
- National Kidney Foundation of Nebraska**
Karen Engelsman, Executive Director
2217 No. 91st Plaza, Omaha 68134
(402) 397-9234 — NE toll free 800-642-1255
- National Multiple Sclerosis Society — Nebraska-Iowa Midlands Chapter**
3624 Leavenworth, Omaha 68105
- National Society to Prevent Blindness, Nebraska Affiliate**
120 North 69th St., Suite 203, Omaha 68132-2720
- Nebraska Academy of Ophthalmology**
Mylan Van Newkirk, M.D., President
329 West 40th, Scottsbluff 69361
- Nebraska Academy of Otolaryngology**
Michael Crawford, M.D., President
201 Ridge St., #311, Council Bluffs, IA 51501
- Nebraska Allergy Society**
Linda B. Ford, M.D., President
401 E. Gold Coast Rd., Papillion 68128
- Nebraska Association of Medical Assistants, Inc.**
Marie Madison, President
405 East Stolley Park Rd., Grand Island 68801
- Nebraska Association of Nuclear Physicians, Inc.**
Merton A. Quaipe, M.D., President
Dept. of Radiology, UNMC - 42nd & Dewey Ave., Omaha 68105
- Nebraska Association of Pathologists**
Joseph Rapoport, M.D., President
6901 No. 72nd St., Omaha 68122
- Nebraska Chapter — American Academy of Family Physicians**
David H. Filipi, M.D., Secretary-Treasurer
Mrs. Phyllis G. Hansen, Executive Secretary
River City Office Park, #202, 401 N. 117th, Omaha 68154
- Nebraska Chapter — American Academy of Physician Assistants**
John Ries, PA-C, President
1101 N. 50th, Omaha 68132
- Nebraska Chapter — American Academy of Pediatrics**
H. J. Kuehn, M.D., Chairman
8300 Dodge St., #219, Omaha 68114
- Nebraska Chapter — American College of Emergency Physicians**
Richard L. Keller, M.D., President
9641 No. 29th, Omaha 68112
- Nebraska Chapter — American College of Physicians**
Frederick F. Paustian, M.D., F.A.C.P., Governor
UNMC - 42nd & Dewey Ave., Omaha 68105
- Nebraska Chapter — American College of Surgeons**
Louis J. Gogela, M.D., Past President
2221 South 17th St., Lincoln 68502
- Nebraska Chapter of Myasthenia Gravis Foundation**
John F. Aita, M.D., Medical Advisor
105 So. 49th St., Omaha 68132
- Nebraska Dental Association**
Barry Ross, Executive Director
134 So. 13th St., Suite 1007, Lincoln 68508
- Nebraska Dietetic Association**
Linda O. Young, M.S., R.D., President
University of NE - 214 Ruth, Leventon Hall, Lincoln 68503
- Nebraska Health Care Association**
Sandra H. Hockley, Executive Director
3100 "O" St., Ste. 7, Lincoln 68510
- Nebraska Hospital Association**
Harlan Heald, President
Box 94833, 1335 "L" St., Lincoln 68509
- Nebraska League for Nursing**
Priscilla Allen, R.N., President
Box 126, Daykin 68338
- Nebraska Medical Association**
William L. Schellpeper, Executive Secretary
1512 First Tier Bank Bldg., Lincoln 68508
- Nebraska Medical Foundation**
William L. Schellpeper, Executive Secretary
1512 First Tier Bank Bldg., Lincoln 68508
- Nebraska Nurses Association**
Mary Ann Sak, Executive Director
Suite 711, Terminal Bldg., Lincoln 68508
- Nebraska Orthopaedic Society**
Ronald Schwab, M.D., Secretary
2300 South 13th St., Lincoln 68502
- Nebraska Perinatal Organization**
Joy Jacobs, R.N., Secretary-Treasurer
St. Elizabeth Community Health Center - Labor & Del. Dpt.,
566 So. 70th St., Lincoln 68510
- Nebraska Pharmacists Association**
Tom R. Dolan, R.P., Executive Director
600 So. 12th, Lincoln 68508
- Nebraska Psychiatric Society, District Branch of the American Psychiatric Association**
John Y. Donaldson, M.D., President
6901 No. 72nd St., Omaha 68122
- Nebraska Public Health Association**
President, N.P.H.A.
P.O. Box 94813, Lincoln 68509
- Nebraska Radiological Society**
Joseph C. Anderson, M.D., President
Dept. of Radiology, UNMC - 42nd & Dewey, Omaha 68105
- Nebraska Rheumatism Association**
Arthur L. Weaver, M.D., President
2121 South 56th St., Lincoln 68506
- Nebraska Section, American College of Obstetricians & Gynecologists**
Larry E. Roffman, M.D.9
800 Doctors Bldg., Omaha 68131
- Nebraska Society of Anesthesiologists**
K. Reed Peters, M.D., President
1512 First Tier Bank Bldg., Lincoln 68508
- Nebraska Society of Internal Medicine**
Vernon Garwood, M.D., President
120 Wedgewood Drive, Suite A, Lincoln 68510
- Nebraska Society for Respiratory Therapy**
Lynn Lamprecht, RRT, President
Mem. Hospital of Dodge Co., 450 E. 23rd St.
- Nebraska State Department of Health**
Gregg Wright, M.D., Director of Health
P.O. Box 95007, 301 Centennial Mall South, Lincoln 68509
- Nebraska State Obstetric and Gynecology Society**
Dennis D. Beavers, M.D., Secretary-Treasurer
720 No. 87th St., Omaha 68114
- Nebraska Stroke Foundation**
Karyl Newman, President
P.O. Box 67004, Lincoln 68506
- Nebraska Urological Association**
Charles F. Damico, M.D., F.A.C.S., President
2115 No. Kansas, Hastings 68901
- Nebraska Veterinary Medical Association**
Don Ellerbee, Executive Director
209 West 9th St., Hastings 68901
- Omaha Mid-West Clinical Society**
Ms. Lorraine E. Seibel, Executive Secretary
7363 Pacific St., #205-B, Omaha 68114
- United Cerebral Palsy of Lancaster County, Inc.**
Jane Hoffart, Client Services Rep.
P.O. Box 80103, Lincoln 68501
- University of Nebraska Medical Center**
Charles E. Andrews, M.D., Chancellor
42nd & Dewey Ave., Omaha 68105

Nebraska Medical Association Officers and Commissions

OFFICERS

Hiram R. Walker, M.D., Kearney President
 L. Dwight Cherry, M.D., Lincoln President-Elect
 Robert F. Shapiro, M.D., Lincoln Secretary-Treasurer
 Kenneth E. Neff, Lincoln Executive Director
 William L. Schellpeper, Lincoln Assistant Executive Director

AMA Delegates — C. J. Cornelius, Jr., M.D.,
 Sidney; John D. Coe, M.D., Omaha; AMA Alter-
 nate Delegates — Louis J. Gogela, M.D., Lincoln;
 Blaine Y. Roffman, M.D., Omaha.

BOARD OF DIRECTORS

Hiram R. Walker, Kearney Chairman
 L. Dwight Cherry, M.D., Lincoln Vice-Chairman
 Robert F. Shapiro, M.D., Lincoln Secretary-Treasurer
 Francis D. Donahue, M.D., Omaha Past President
 Paul E. Collicott, M.D. Lincoln
 Richard A. Raymond, M.D. O'Neill
 Donald J. Pavelka, M.D. Omaha
 Alvin A. Armstrong, M.D. Scottsbluff
 Richard H. Meissner, M.D. Omaha
 Stanley M. Truhlsen, M.D. Omaha

COMMISSION ON ASSOCIATION AFFAIRS

Harry W. McFadden, M.D., Chairman Omaha
 R. A. Blatny, M.D. Fairbury
 Stuart P. Embury, M.D. Holdrege
 Joel T. Johnson, M.D. Kearney
 Bernard L. Kratochvil, M.D. Omaha
 Walter O'Donohue, M.D. Omaha
 Joseph E. Stitche, M.D. Lincoln
 R. C. Weldon, M.D. Nebraska City

SCIENTIFIC SESSIONS COMMITTEE

Sushil S. Lacy, M.D., Chairman Lincoln
 Donald E. Waltemath, M.D., Convention Chairman Lincoln
 David L. Bacon, M.D. Kearney
 Paul J. Bender, Jr., M.D. Omaha
 Michael A. Breiner, M.D. Lincoln
 Mark A. Christensen, M.D. Omaha
 Richard A. Hranac, M.D. Kearney
 Donald J. Larson, M.D. Lincoln
 Donna K. Nelson, M.D. Omaha
 Richard M. Tempero, M.D. Omaha

COMMISSION ON MEDICAL SERVICES

William L. Rumbolz, M.D., Chairman Omaha
 Patrick E. Clare, M.D. Lincoln
 C. J. Cornelius, Jr., M.D. Sidney
 Richard A. Hranac, M.D. Kearney
 F. William Karrer, M.D. Omaha
 Dale E. Michels, M.D. Lincoln
 Robert G. Osborne, M.D. Lincoln
 Richard J. Petersen, M.D. Omaha
 Kenton L. Shaffer, M.D. Kearney

AD-HOC COMMITTEE ON ATHLETIC MEDICINE

Patrick E. Clare, M.D., Chairman Lincoln
 Stanley M. Bach, M.D. Omaha
 Warren G. Bosley, M.D. Grand Island
 S. I. Fuenning, M.D. Lincoln
 Jack K. Lewis, M.D. Omaha
 Morris B. Mellon, M.D. Omaha
 Richard A. Raymond, M.D. O'Neill
 Wm. Michael Walsh, M.D. Omaha
 George F. Sullivan, R.P.T. Lincoln
 Wayne Wagner, A.T.C. Omaha

AD-HOC COMMITTEE ON MATERNAL & CHILD HEALTH

Kenton L. Shaffer, M.D., Chairman Kearney

Section on Maternal Mortality Review

George M. Adam, M.D. Hastings
 James G. Cummins, M.D. Omaha
 L. Palmer Johnson, M.D. Lincoln
 William Rayburn, M.D. Omaha
 William L. Rumbolz, M.D. Omaha
 Larry Wilson, M.D. Gothenburg

Section on Perinatal Mortality Review

Lawrence C. Bausch, M.D. Lincoln
 Stacie R. Bleicher, M.D. Lincoln
 Robert S. Grant, M.D. Lincoln
 Robert M. Nelson, M.D. Omaha

AD-HOC COMMITTEE ON PSYCHIATRY

Robert G. Osborne, M.D., Chairman Lincoln
 Jehangir B. Bastani, M.D. Lincoln
 Klaus Hartmann, M.D. Lincoln
 Harry C. Henderson, Jr., M.D. Omaha
 J. Whitney Kelley, M.D. Omaha
 William B. Long, M.D. Omaha
 Merle Sjogren, M.D. Kearney

AD-HOC COMMITTEE ON GERIATRICS

Richard A. Hranac, M.D., Chairman Kearney
 Ronald L. Asher, M.D. North Platte
 J. Whitney Kelley, M.D. Omaha
 Jane F. Potter, M.D. Omaha
 William J. Reedy, M.D. Omaha
 John A. Ursick, M.D. Omaha
 Vernon G. Ward, M.D. Omaha
 Frederick Youngblood, M.D. Omaha

AD-HOC COMMITTEE ON ALTERNATE HEALTH PLANS I

Carl J. Cornelius, Jr., M.D., Chairman Sidney
 Warren G. Bosley, M.D. Grand Island
 Dale W. Ebers, M.D. Lincoln
 Vernon F. Garwood, M.D. Lincoln
 Richard H. Meissner, M.D. Omaha

Ex-Officio:

Michael J. Haller, M.D. Omaha
 Roger D. Mason, M.D. Omaha

AD-HOC COMMITTEE ON ALTERNATE HEALTH PLANS II

Dale E. Michels, M.D., Chairman Lincoln
 Lonnie S. Albers, M.D. Lincoln
 Audrey A. Paulman, M.D. Omaha
 Dwaine J. Peetz, Jr., M.D. Omaha
 Harlan C. Shriner, M.D. Lincoln
 Sebastian J. Troia, M.D. Omaha

COMMITTEE ON HEALTH PLANNING

Carl J. Cornelius, Jr., M.D., Chairman Sidney
 Gordon D. Adams, M.D. Norfolk
 Lewiston W. Birkmann, M.D. Lincoln
 James S. Carson, M.D. McCook
 Chris C. Caudill, M.D. Lincoln
 Allen D. Dvorak, M.D. Omaha
 Dale W. Ebers, M.D. Lincoln
 Louis J. Gogela, Jr., M.D. Beatrice
 Roger D. Mason, M.D. Omaha
 Donald F. Prince, M.D. Minden
 C. Lee Retelsdorf, M.D. Omaha
 Thomas H. Wallace, M.D. Gordon

AD-HOC COMMITTEE ON TUMOR REGISTRY

F. William Karrer, M.D., Chairman Omaha
 Elvin G. Brown, M.D. Hastings
 John H. Casey, M.D. Lincoln
 James R. Commers, M.D. Omaha
 John B. Davis, M.D. Omaha
 Howard A. Dinsdale, M.D. Lincoln
 C. Lee Retelsdorf, M.D. Omaha
 Ron D. Scott, M.D. Kearney

AD-HOC COMMITTEE ON LOW LEVEL

RADIATION WASTE DISPOSAL

Richard J. Petersen, M.D., Chairman Omaha
 Allen D. Dvorak, M.D. Omaha
 Stanley Jaeger, M.S. Omaha
 Martin R. Lohff, M.D. Omaha
 Wm. H. Northwall, M.D. Kearney
 Merton A. Quaife, M.D. Omaha
 Jerald R. Schenken, M.D. Omaha
 Paul Steffes, M.D. Omaha

COMMISSION ON LEGISLATION AND GOVERNMENTAL AFFAIRS

Craig L. Urbauer, M.D., Chairman Lincoln
 Ronald L. Klutman, M.D., Co-Chairman Columbus
 Dwaine J. Peetz, M.D., Advisor Neligh
 Judith A. Butler, M.D. Superior
 James H. Dunlap, M.D. Norfolk
 Dale W. Ebers, M.D. Lincoln
 Charles Gregorius, M.D. Lincoln
 Bruce W. Henricks, M.D. Fremont
 Barbara M. Heywood, M.D. Papillion
 John T. McGreer, III, M.D. Lincoln
 Dennis G. O'Leary, M.D. Omaha
 Robert G. Osborne, M.D. Lincoln
 Richard A. Raymond, M.D. O'Neill
 Herbert E. Reese, M.D. Lincoln
 Blaine Y. Roffman, M.D. Omaha
 Jerald R. Schenken, M.D. Omaha
 Bruce D. Smith, M.D. Kearney

Todd S. Sorensen, M.D.	Scottsbluff
Richard B. Svehla, M.D.	Omaha
Mylan R. VanNewkirk, M.D.	Scottsbluff
Timothy D. Wahl, M.D.	Omaha

AD-HOC COMMITTEE ON HEALTH POLICY STATEMENTS

C. Lee Retelsdorf, M.D., Chairman	Omaha
Daniel S. Durrie, M.D.	Omaha
Darroll J. Loschen, M.D.	York
Dale E. Michels, M.D.	Lincoln
Charles S. Wilson, M.D.	Lincoln
Frederick Youngblood, M.D.	Omaha

AD-HOC COMMITTEE ON PROFESSIONAL LIABILITY

James H. Dunlap, M.D., Chairman	Norfolk
David L. Bacon, M.D.	Kearney
Warren G. Bosley, M.D.	Grand Island
Ernest W. Chupp, M.D.	Omaha
F. M. Gaweck, M.D.	Papillion
Dwayne J. Peetz, M.D.	Neligh
Herbert E. Reese, M.D.	Lincoln
Blaine Y. Roffman, M.D.	Omaha

COMMISSION ON MEDICAL EDUCATION

Frederick F. Paustian, M.D., Chairman	Omaha
Robert L. Bass, M.D.	Elkhorn
Patrick E. Brookhouser, M.D.	Omaha
Christopher P. Crotty, M.D.	Omaha
Charles F. Damico, M.D.	Hastings
Charles A. Dobry, M.D.	Omaha
A. Dean Gilg, M.D.	Lincoln
William E. Lundak, M.D.	Lincoln
Richard L. O'Brien, M.D.	Omaha
Dwayne J. Peetz, Jr., M.D.	Omaha
Joseph C. Scott, M.D.	Omaha
Robert H. Waldman, M.D.	Omaha

AD-HOC COMMITTEE ON HEALTH EDUCATION

Warren G. Bosley, M.D., Chairman	Grand Island
Stephen J. Lanspa, M.D.	Omaha
Paul H. Phillips, M.D.	Scottsbluff
Eileen C. Vautravers, M.D.	Lincoln
Wesley G. Wilhelm, M.D.	Omaha
Gregg F. Wright, M.D.	Lincoln

COMMISSION ON PUBLIC AFFAIRS

Rodney S. W. Basler, M.D., Chairman	Lincoln
H. Jeffrey Deeths, M.D.	Omaha
Herbert D. Feidler, M.D.	Norfolk
Edward E. Gatz, M.D.	Omaha
Donald T. Glow, M.D.	Omaha
John J. Hoising, M.D.	Omaha
Roger P. Massie, M.D.	Plainview
Donald E. Mathews, M.D.	Lincoln
Harlan C. Shriner, M.D.	Lincoln
F. Thomas Waring, M.D.	Fremont

COMMISSION ON HOSPITAL MEDICAL STAFF

Steven A. Schwid, M.D., Chairman	Omaha
Richard A. Hranac, M.D.	Kearney
Harry E. Keig, M.D.	Papillion
Glen F. Lau, M.D.	Lincoln
Barney B. Rees, M.D.	Omaha
Joseph G. Rogers, M.D.	Lincoln
Gerald Rounsberg, M.D.	North Platte
William A. Shiffermiller, M.D.	Omaha
Stephen D. Torpy, M.D.	Omaha

COUNCILOR DISTRICTS AND COUNTIES

First District: Councilor: Stanley M. Truhlsen, Omaha. Counties: Douglas, Sarpy.

Second District: Councilor: Howard A. Dinsdale, Lincoln. Counties: Cass, Lancaster, Otoe.

Third District: Councilor: C. T. Frerichs, Beatrice. Counties: Gage, Johnson, Nemaha, Pawnee, Richardson.

Fourth District: Councilor: Roger Massie, Plainview. Counties: Antelope, Cedar, Cuming, Dakota, Dixon, Knox, Madison, Pierce, Stanton, Thurston, Wayne.

Fifth District: Councilor: William Chleborad, M.D., Fremont. Counties: Boone, Burt, Colfax, Dodge, Merrick, Nance, Platte, Washington.

Sixth District: Councilor: Robert Herpolzheimer, M.D., Seward. Counties: Butler, Hamilton, Polk, Saunders, Seward, York.

Seventh District: Councilor: Robert Quick, M.D., Crete. Counties: Clay, Fillmore, Jefferson, Nuckolls, Saline, Thayer.

Eighth District: Councilor: Floyd H. Shiffermiller, Ainsworth. Counties: Boyd, Brown, Cherry, Holt, Keya Paha, Rock, Sheridan.

Ninth District: Councilor: Stanley Nabity, Grand Island. Counties: Blaine, Buffalo, Custer, Dawson, Garfield, Grant, Greeley, Hall, Hooker, Howard, Loup, Sherman, Thomas, Valley, Wheeler.

Tenth District: Councilor: David R. Little, M.D., Hastings. Counties: Adams, Chase, Dundy, Franklin, Frontier, Furnas, Gosper, Harlan, Hayes, Hitchcock, Kearney, Phelps, Red Willow, Webster.

Eleventh District: Councilor: Donald E. Fischer, North Platte. Counties: Arthur, Deuel, Garden, Keith, Lincoln, Logan, McPherson, Perkins.

Twelfth District: Councilor: Donald E. Wilkinson, Alliance. Counties: Banner, Box Butte, Cheyenne, Dawes, Kimball, Morrill, Scotts Bluff, Sioux.

NEBRASKA MEDICAL ASSOCIATION Councilor Districts and Component County Medical Societies COMPONENT COUNTY MEDICAL SOCIETIES

COUNTY	PRESIDENT	SECRETARY-TREASURER
Adams	Kevin Wycoff, Hastings	Richard French, Hastings
Antelope-Pierce	Kenneth Peters, Plainview	David Johnson, Osmond
Box Butte	D. D. Shannon, Alliance	Chris Wilkinson, Alliance
Buffalo	Robert T. Urban, Kearney	L. D. Helmick, Kearney
Butler	Victor Thoendel, David City	Gerald Luckey, David City
Cass	R. R. Anderson, Nehawka	Glen K. Knosp, Elmwood
Cheyenne-Kimball-Deuel	James Thayer, Sidney	Clinton Dorwart, Sidney
Cuming	Ed Simodynes, West Point	
Custer	Loren Jacobsen, Broken Bow	N. Leon Books, Broken Bow
Dawson		Rodney Sitorius, Cozad
Dodge	Rod Koerber, Fremont	W. B. Eaton, Fremont
Five	Willis L. Wiseman, Wayne	Robert Benthack, Wayne
Four	Tom Martin, Ord	Otis Miller, Ord
Gage	Alan Langvardt, Beatrice	Louis J. Gogela, Jr., Beatrice
Hall	L. W. Hake, Grand Island	Gordon Francis, Grand Island
Hamilton	Scott D. Bergfeld, Aurora	John Wilcox, Aurora
Holt & Northwest	Melvin Campbell, Ainsworth	John Bryd, Valentine
Jefferson	Gordon O. Johnson, Fairbury	R. A. Blatny, Fairbury
Knox	D. M. Laflan, Creighton	D. J. Nagengast, Bloomfield
Lancaster	Vernon F. Garwood, Lincoln	Eugene Schwenke, Lincoln
Lincoln	Cleve Hartman, North Platte	Byron Barksdale, North Platte
Madison	G. Tom Surber, Norfolk	C. Robert Adams, Norfolk
Metropolitan Omaha	Perry T. Williams, Omaha	F. F. Paustian, Omaha
Northeast	G. Tom Surber, Norfolk	C. Robert Adams, Norfolk
Northwest	Joel Hutchins, Gordon	Roger Norvaez, Rushville
Otoe	Dean R. Thomson, Nebraska City	Paul R. Madison, Nebraska City
Keith-Perkins-Chase	Berl W. Spencer, Ogallala	E. A. Holyoke, Ogallala
Platte-Loup Valley	Arthur Liebenritt, Columbus	Dwight Rickard, Columbus
Saline		Robert E. Tuma, Crete
Sarpy	Fred Gaweck, Papillion	Fred Schwartz, Papillion
Saunders	I. M. French, Wahoo	John E. Hansen, Jr., Wahoo
Scotts Bluff	Milton Johnson, Scottsbluff	John Williams, Scottsbluff
Seward	Paul Hoff, Seward	Roger Jacobs, Seward
South Central	Jeff Hollins, Geneva	Chas. F. Ashby, Geneva
Southeast Nebr.	Gary Ensz, Auburn	George Voigtlander, Pawnee City
Southwest Nebr.	David A. Allerheilgen, McCook	E. C. Beyer, McCook
Washington-Burt	H. Neal Sievers, Blair	K. C. Bagby, Blair
York	James D. Bell, York	B. N. Greenberg, York

Physicians' Classified

Advertisements in this column are run at a rate of twenty cents per word with a minimum of \$10.00 per insertion. Copy must be received by the fifth of the month preceding the date of publication and should not exceed 50 words. Each advertisement will be taken out following its first appearance unless otherwise instructed. Where numbers follow advertisements, replies should be addressed in care of The Nebraska Medical Journal, 1512 First Tier Bank Building, Lincoln, Nebraska 68508.

EXCELLENT OPPORTUNITIES FOR: Otorhinolaryngologist, Psychiatrist, Endocrinologist, Radiologist, Orthopedist, and General/Family Practitioner. Excellent opportunity for physicians in Los Angeles suburb to join 80-member multispecialty medical group. Large fee-for-service and prepaid practice, no Medi-Cal. Excellent compensation program based on guarantee plus incentive, profit sharing and pension plan. Group provides health, dental, life and malpractice. Partnership in real estate and medical corporation available. See our add in this publication. Send CV to William Shaw, Associate Administrator, Mullikin Medical Center, 17821 S. Pioneer Blvd., Artesia, CA 90701.

OPPORTUNITY: Be a "winter Texan" internist. Enjoy the warm, beautiful Rio Grande Valley while practicing internal medicine with an internist. Texas license essential. Salary, living accommodations and malpractice insurance. Send curriculum vitae to 104 South Bryan Road, Mission, TX 78572 or contact (512) 585-2783 for more information.

ORTHOPEDIC SURGEON: Needed. Immediate opening for Board Certified/Eligible Orthopedist in medium size community. General orthopedic practice with opportunity to specialize in time. Send CV and letter of inquiry to: Foothills Orthopedic and Sports Medicine Clinic, 1260 Doctors Lane, Ft. Collins, CO 80524, Attention: Jan Wright, (303) 484-6587.

ORTHOPEDIST: Excellent opportunity for orthopedist in Los Angeles Suburb to join 80 member multispecialty medical group. Large fee-for-service and prepaid practice, no Medi-Cal. Excellent compensation program based on guarantee plus incentive, profit sharing and pension plan. Group provides health, dental, life and malpractice. Partnership in real estate and medical corporation available. Send CV to William Shaw, Associate Administrator, Mullikin Medical Center, 17821 So. Pioneer Blvd., Artesia, CA 90701.

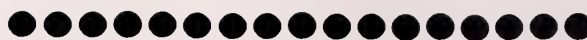


**NEBRASKA
MEDICAL ASSOCIATION**

119th Annual Session

April 24-28, 1987

**CORNHUSKER HOTEL
Lincoln, Nebraska**



Drug/Alcohol/Emotional/Other Health Problems

HELP IS AVAILABLE
FOR YOU

FOR A MEMBER OF YOUR FAMILY
FOR A PROFESSIONAL, FRIEND OR
COLLEAGUE

Call

The Physician's Advocacy Committee
(Nebraska Medical Association)

Strictly Confidential — Professional — Effective

For information call:

402-393-3216

(You do not have to give your name.)



ADVERTISER'S INDEX

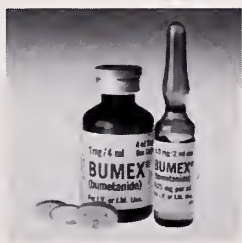
C	
Contemporary Speakers	8
D	
Donley Medical Supply.....	6
L	
Eli Lilly & Company	4
M	
Mullikin Medical Centers.....	2
N	
Norfolk Printing Co., Inc.....	6
P	
Postgraduate Medicine	10
R	
Roche Laboratories	15, 16
U	
Upjohn Company	3

Bumex[®]

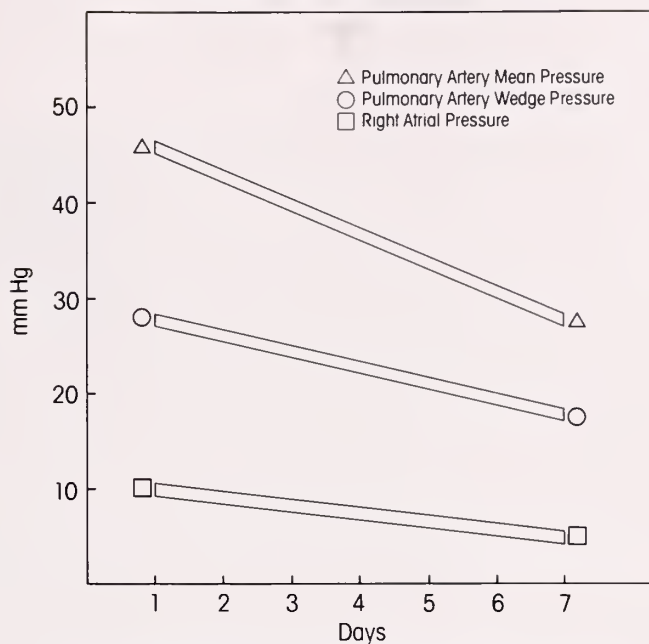
bumetanide/Roche

0.5-mg, 1-mg and 2-mg scored tablets,
2-ml ampuls (0.25 mg/ml) and 2-ml, 4-ml
and 10-ml vials (0.25 mg/ml)

REDUCES FLUID OVERLOAD and eases the burden on the failing heart



Significantly improves hemodynamics



Ten patients with CHF showed marked hemodynamic improvement after seven days of BUMEX[®] (bumetanide/Roche) (mean values $\pm$ SE). Adopted from Olesen, *et al.*¹

References: 1. Olesen KH, *et al.* *Postgrad Med J* 51(Suppl 6):54-63, 1975. 2. Handler B, Dhingra RC, Rosen KM. *J Clin Pharmacol* 21:706-711, Nov-Dec 1981. 3. Brater DC, *et al.* *Clin Pharmacol Ther* 34:207-213, Aug 1983. 4. Brater DC, Fox WR, Chennavasin P. *J Clin Pharmacol* 21:599-603, Nov-Dec 1981. 5. Davies DL, *et al.* *Clin Pharmacol Ther* 15:141-155, Feb 1974.

BUMEX[®]
bumetanide/Roche
0.5-mg, 1-mg and 2-mg scored tablets,
2-ml ampuls, 2-ml, 4-ml and
10-ml vials (0.25 mg/ml)

BUMEX[®] (bumetanide/Roche)
Before prescribing, please consult complete product information, a summary of which follows:

WARNING: Bumex (bumetanide/Roche) is a potent diuretic which, if given in excessive amounts, can lead to a profound diuresis with water and electrolyte depletion. Therefore, careful medical supervision is required, and dose and dosage schedule have to be adjusted to the individual patient's needs. (See under DOSAGE AND ADMINISTRATION in complete product information.)

INDICATIONS AND USAGE: Edema associated with congestive heart failure, hepatic and renal disease, including the nephrotic syndrome. Almost equal diuretic response occurs after oral and parenteral administration of Bumex. It is important that gastrointestinal absorption is suspected or oral administration is not practical. Bumex should be given by the intramuscular or intravenous route. Successful treatment with Bumex following instances of allergic reactions to furosemide suggests a lack of cross-sensitivity.

CONTRAINDICATIONS: Anuria. Hypersensitivity and in patients in hepatic coma or in states of severe electrolyte depletion. Although Bumex can be used to induce diuresis in renal insufficiency, any marked increase in blood urea nitrogen or creatinine, or the development of oliguria during therapy of patients with progressive renal disease, is an indication for discontinuation of treatment.

WARNINGS: Dose should be adjusted to patient's needs. Excessive doses or too frequent administration can lead to profound water loss, electrolyte depletion, dehydration, reduction in blood volume and circulatory collapse with the possibility of vascular thrombosis and embolism, particularly in elderly patients.

Prevention of hypokalemia requires particular attention in patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis and ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, certain diarrheal states, or other states where hypokalemia is thought to represent particular added risks to the patients. In patients with hepatic cirrhosis and ascites, sudden alterations of electrolyte balance may precipitate hepatic encephalopathy and coma. Treatment in such patients is best initiated in the hospital with small doses and careful monitoring of the patient's clinical status and electrolyte balance. Supplemental potassium and/or spironolactone may prevent hypokalemia and metabolic alkalosis in these patients.

In cats, dogs and guinea pigs, Bumex has been shown to produce ototoxicity. Since Bumex is about 40 to 60 times as potent as furosemide, it is anticipated that blood levels necessary to produce ototoxicity will rarely be achieved. The potential for ototoxicity increases with intravenous therapy, especially at high doses.

Patients allergic to sulfonamides may show hypersensitivity to Bumex.

PRECAUTIONS: Measure serum potassium periodically and add potassium supplements or potassium-sparing diuretics, if necessary. Periodic determinations of other electrolytes are advised in patients treated with high doses or for prolonged periods, particularly in those on low salt diets. Hyperuricemia may occur. Reversible elevations of the BUN and creatinine may occur, especially with dehydration and in patients with renal insufficiency. Bumex may increase urinary calcium excretion.

Possibility of effect on glucose metabolism exists. Periodic determinations of blood sugar should be done, particularly in patients with diabetes or suspected latent diabetes.

Patients should be observed regularly for possible occurrence of blood dyscrasias, liver damage or idiosyncratic reactions.

Especially in presence of impaired renal function, use of parenterally administered Bumex should be avoided in patients to whom aminoglycoside antibiotics are also being given, except in life-threatening conditions.

Drugs with nephrotoxic potential and bumetanide should not be administered simultaneously. Since lithium reduces renal clearance and adds a high risk of lithium toxicity, it should not be given with diuretics.

Prabecicid should not be administered concurrently with Bumex.

Concurrent therapy with indomethacin not recommended.

Bumex may potentiate the effects of antihypertensive drugs, necessitating reduction in dosage.

Interaction studies in humans have shown no effect on digoxin blood levels.

Interaction studies in humans have shown Bumex to have no effect on warfarin metabolism or on plasma prothrombin activity.

Pregnancy: Bumex should be given to a pregnant woman only if the potential benefit justifies the potential risk to the fetus.

Bumetanide may be excreted in breast milk.

Pediatric Use: Safety and effectiveness below age 18 not established.

ADVERSE REACTIONS: Muscle cramps, dizziness, hypotension, headache and nausea, and encephalopathy (in patients with preexisting liver disease).

Less frequent clinical adverse reactions are weakness, impaired hearing, rash, pruritus, hives, electrocardiogram changes, abdominal pain, arthritic pain, musculoskeletal pain and vomiting. Other clinical adverse reactions are vertigo, chest pain, ear discomfort, fatigue, dehydration, sweating, hyperventilation, dry mouth, upset stomach, renal failure, asterixis, itching, nipple tenderness, diarrhea, premature ejaculation and difficulty maintaining an erection.

Laboratory abnormalities reported are hyperuricemia, azotemia, hyperglycemia, increased serum creatinine, hypochloremia, hypokalemia, hyponatremia, and variations in CO₂ content, bicarbonate, phosphorus and calcium. Although manifestations of the pharmacologic action of Bumex, these conditions may become more pronounced by intensive therapy.

Diuresis induced by Bumex may also rarely be accompanied by changes in LDH, total serum bilirubin, serum proteins, SGOT, SGPT, alkaline phosphatase, cholesterol, creatinine clearance, deviations in hemoglobin, prothrombin time, hematocrit, platelet counts and differential counts. Increases in urinary glucose and urinary protein have also been seen.

DOSAGE AND ADMINISTRATION:

Oral Administration: The usual total daily dosage is 0.5 to 2.0 mg and in most patients is given as a single dose.

Parenteral Administration: Administer to patients (IV or IM) with GI absorption problem or who cannot take oral. The usual initial dose is 0.5 to 1 mg given over 1 to 2 minutes. If insufficient response, a second or third dose may be given at 2 to 3 hour intervals up to a maximum of 10 mg a day.

HOW SUPPLIED: Tablets, 0.5 mg (light green), 1 mg (yellow) and 2 mg (peach), bottles of 100 and 500, Prescription Packs of 30, Tel-E-Dose[®] cartons of 100. Imprint on tablets: 0.5 mg—ROCHE BUMEX 0.5, 1 mg—ROCHE BUMEX 1, 2 mg—ROCHE BUMEX 2.

Ampuls, 2 ml, 0.25 mg/ml, boxes of ten.

Vials, 2 ml, 4 ml and 10 ml, 0.25 mg/ml, boxes of ten.



ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

OVERLOAD

Reduce fluid volume and improve hemodynamics in CHF

Edema due to congestive heart failure often demands highly effective diuresis to reduce the fluid load on the failing heart. Bumex® (bumetanide/Roche) is the next generation in loop diuretic therapy for three powerful reasons. It moves out an unsurpassed volume of fluid and sodium, resulting in significant reductions in edema and right atrial and pulmonary artery wedge pressures.^{1,2} It's almost completely absorbed through the GI tract, so it's easy to

titrate.³ And Bumex completes high-volume diuresis fast—within four hours at usual doses.^{4,5} Your patients spend less time in diuresis, more time in normal activities.

Bumex has a good safety profile; however, as with all loop diuretics, Bumex, if given in excessive amounts, can lead to profound diuresis with water and electrolyte depletion, including hypokalemia. Serum electrolytes should be monitored periodically, especially in patients on low salt diets or those treated for prolonged periods or on high doses.



Bumex® 
bumetanide/Roche

0.5-mg, 1-mg and 2-mg scored tablets, 2-ml ampuls (0.25 mg/ml)
and 2-ml, 4-ml and 10-ml vials (0.25 mg/ml)

**First line
loop diuretic therapy**

THE NEBRASKA MEDICAL JOURNAL



119
Years



Contents

Editorial

- A Computer in the Office:
Yesterday, Today and Tomorrow **25**
D. A. Decker, Jr., M.D.

Original Articles

- Transcatheter Closure of
Patent Ductus Arteriosus **28**
Larry A. Latson, M.D.
Philip J. Hofschire, M.D.
John D. Kugler, M.D.
John P. Cheatham, M.D.
Carl H. Gumbiner, M.D.

- The Assessment of Physical Fitness **31**
Thomas P. K. Lim, M.D., Ph.D.
Michael Dehning, M.D.

- Maternal Mortality Review
1983-1984-1985 **38**
William L. Rumbolz, M.D.

- Urinary Tract Calculi in Preg
Paul M. Paulman, M.D.

History of Medicine

- University of Nebraska Medical
Center Department of
Pathology and Microbiology **42**
J. R. Newland, M.D.
C. A. McWhorter, M.D.
J. P. Tollman, M.D.

Abstracts

- Abstracts for the Second Nebraska
Symposium on Cancer and
Smoking-Related Diseases **52**

Features

- President's Page **65**
- The Auxiliary **66**
- Welcome New Members **68**
- Memoriam **68**
- 69**

THE N.Y. ACADEMY OF MED.
LIB-PERIODICALS DEPT
2 EAST 103RD ST
NEW YORK
NY 10029

Plan Now to Attend

1987 N.M.A. Annual Session

These Scientific Sessions and Organizational Meetings Are Being Developed

NEBRASKA ALLERGY SOCIETY

This course will cover the topic of chronic EB Virus infection, the signs and symptoms, laboratory evaluation and its relationship to the area of Allergy syndromes.

AMERICAN HEART ASSOCIATION, NEBRASKA AFFILIATE, LINCOLN DIVISION

This course is designed to update the primary care physician's knowledge of the current state of the art of heart transplantation; selection of patients and patient transportation; and pre- and post-operative care of the heart transplant patient. An update on angioplasty and streptokinase will conclude the session.

NEBRASKA ORGAN RETRIEVAL SYSTEM, INC.

This course will present a brief update related to the status of organ and tissue recovery within the State of Nebraska. Influences of in-state multiple organ transplantation, and both local and national legislation addressing pertinent issues will be explored.

NEBRASKA CHAPTER OF THE AMERICAN ACADEMY OF PEDIATRICS

The Nebraska Chapter of the American Academy of Pediatrics' course will be a comprehensive course in the approach to the physically and sexually abused child and adolescent.

NEBRASKA PERINATAL ORGANIZATION

There will be a wide range of perinatal topics, current as well as what can be expected in the future, presented on April 24, 1987. Included will be discourses on genetics, neonatal infections, FHR monitoring, infant stimulation, inborn errors of metabolism, home health care for NICU graduates, and panels discussing neonatal and perinatal issues.

NEBRASKA CHAPTER OF THE AMERICAN COLLEGE OF SURGEONS

This meeting will consider and discuss current surgical topics submitted by members and their colleagues.

— Also Participating —

MISSOURI VALLEY DERMATOLOGIC SOCIETY

NEBRASKA CHAPTER, AMERICAN COLLEGE OF EMERGENCY PHYSICIANS

NEBRASKA SOCIETY OF INTERNAL MEDICINE/NEBRASKA CHAPTER OF THE AMERICAN COLLEGE OF PHYSICIANS

NEBRASKA SECTION, AMERICAN COLLEGE OF OBSTETRICIANS & GYNECOLOGISTS

NEBRASKA ACADEMY OF OPHTHALMOLOGY

NEBRASKA ACADEMY OF OTOLARYNGOLOGY

NEBRASKA SOCIETY OF PLASTIC & RECONSTRUCTIVE SURGEONS

NEBRASKA PSYCHIATRIC SOCIETY

NEBRASKA THORACIC SOCIETY

April 24-28, 1987

**Cornhusker Hotel
Lincoln, NE**

Motrin[®] 800 TABLETS mg

ibuprofen

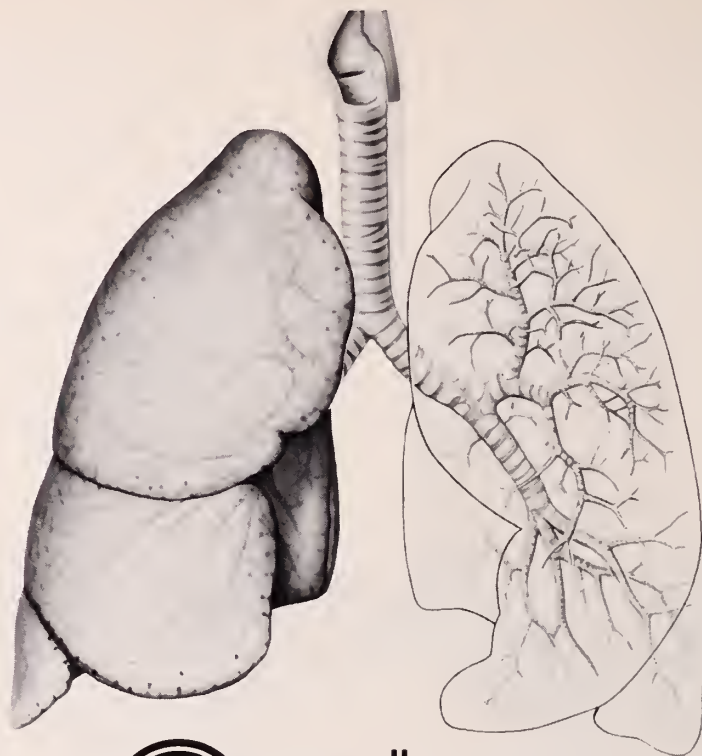


**Extra strength
Convenience
Economy**



A Century
of Caring
1886-1986

Consider the causative organisms...



Ceclor[®]
cefactor

250-mg Pulvules[®] t.i.d.

**offers effectiveness against
the major causes of bacterial bronchitis**

Haemophilus influenzae*, *H influenzae*, *Streptococcus pneumoniae*, *Streptococcus pyogenes
(ampicillin-susceptible) (ampicillin-resistant)

Note: Ceclor[®] is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Ceclor[®] (cefactor)

Summary. Consult the package literature for prescribing information.

Indications: Lower respiratory infections, including pneumonia, caused by susceptible strains of *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci).

Contraindications: Known allergy to cephalosporins.

Warnings: CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-

associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:

• Discontinue Ceclor in the event of allergic reactions to it.

• Prolonged use may result in overgrowth of nonsusceptible organisms.

• Positive direct Coombs' tests have been reported during treatment with cephalosporins.

• In renal impairment, safe dosage of Ceclor may be lower than that usually recommended. Ceclor should be administered with caution in such patients.

• Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

• Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor

penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:

• Gastrointestinal (mostly diarrhea): 2.5%.

• Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.

• Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, erythema multiforme, serum-sickness-like reactions): 1.5%; usually subside within a few days after cessation of therapy. These reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

• Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.

• Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%.

Abnormalities in laboratory results of uncertain etiology

• Slight elevations in hepatic enzymes.

• Transient fluctuations in leukocyte count (especially in infants and children)

• Abnormal urinalysis; elevations in BUN or serum creatinine

• Positive direct Coombs' test

• False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest[®] tablets but not with Tes-Tape[®] (glucose enzymatic test strip, Lilly)

© 1986, ELI LILLY AND COMPANY [060465LR]

Lilly
Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285
Eli Lilly Industries, Inc.
Carolina, Puerto Rico 00630
600332

The Nebraska Medical Journal

FEBRUARY 1987

VOL. 72, NO. 2

EDITOR —

ALAN D. FORKER, M.D.
5505 Ellendale Road,
Lincoln, NE 68510

Associate Editors:

Deepak M. Gangahar, M.D., Lincoln
Charles S. Wilson, M.D., Lincoln

Editorial Board:

James O. Armitage, M.D., Omaha
Rodney S.W. Basler, M.D., Lincoln
Jehangir B. Bastani, M.D., Lincoln
John H. Casey, M.D., Lincoln
Paul E. Collicott, M.D., Lincoln
John F. Connolly, M.D., Omaha
Douglass Decker, Jr., M.D., Lincoln
Robert W. Gillespie, M.D., Lincoln
Stephen R. Grenier, M.D., Lincoln
Bruce D. Gutnik, M.D., Omaha
Roger Harned, M.D., Omaha
Edward A. Holyoke, Jr., M.D., Ogallala
Sushil S. Lacy, M.D., Lincoln
Hal K. Mardis, M.D., Omaha
Gilles R. G. Monif, M.D., Omaha
Walter J. O'Donohue, M.D. Omaha
William F. Rayburn, M.D., Omaha
John L. Reed, M.D., Lincoln
Jerald R. Schenken, M.D., Omaha
Kenton L. Shaffer, M.D., Kearney
Harlan C. Shriner, Jr., M.D., Lincoln
Patricia Cole Stivins, M.D., Lincoln
Harold W. Thaut, M.D., Beatrice
Jon S. Thompson, M.D., Omaha
William L. Vosik, M.D., Kearney
Arthur Weaver, M.D., Lincoln



SUBSCRIPTION RATE

\$18.00 Per Year U.S.
\$18.00 Per Year Foreign Country
Single Copies \$1.50 Each

Copyright © 1987 Nebraska Medical Association. Information concerning reprints of the articles in this Journal and concerning obtaining permission for the reproduction of any portion of this Journal may be obtained from the Editor.

The Nebraska Medical Journal does not assume responsibility for statements made or opinions expressed by the authors. Products and services advertised are neither endorsed nor warrantied by the Nebraska Medical Association. The Nebraska Medical Journal reserves the right to accept or reject advertising copy.

Published monthly and Second-Class Postage paid at Lincoln, Nebraska and at additional mailing offices (ISSN 0091-6730)

Address all correspondence relating to subscriptions, advertising or address changes to William L. Schellpeper, Business Manager, 1512 First Tier Bank Building, Lincoln, Nebraska 68508. Phone (402) 474-4472.

EDITORIAL —

- A Computer in the Office:**
Yesterday, Today and Tomorrow 25
D. A. Decker, Jr., M.D.

ORIGINAL ARTICLES —

- Transcatheter Closure of Patient Ductus Arteriosus..... 28**
Larry A. Latson, M.D.
Philip J. Hofschire, M.D.
John D. Kugler, M.D.
John P. Cheatham, M.D.
Carl H. Gumbiner, M.D.
- The Assessment of Physical Fitness..... 31**
Thomas P. K. Lim, M.D., Ph.D.
Michael Dehning, M.D.
- Maternal Mortality Review 1983-1984-1985 38**
William L. Rumbolz, M.D.
- Urinary Tract Calculi in Pregnancy 40**
Paul M. Paulman, M.D.

HISTORY OF MEDICINE —

- University of Nebraska Medical Center Department
of Pathology and Microbiology..... 42**
J. R. Newland, M.D.
C. A. McWhorter, M.D.
J. P. Tollman, M.D.

ABSTRACTS —

- Abstracts for the Second Nebraska Symposium on Cancer
and Smoking-Related Diseases 52**

FEATURES —

- President's Page 65**
The Auxiliary..... 66
Welcome New Members 68
In Memoriam..... 68
Coming Meetings..... 69

Since 1925

Nebraska's
Leading
Physicians and
Surgical
Supply House

Phone 474-3222



**DONLEY MEDICAL
SUPPLY COMPANY**

P.O. Box 83108, Lincoln, NE 68501
AUTHORIZED CONTRACT AGENT

REPRINTS

OF YOUR

Technical Articles

Are a direct presentation of research
and a valuable supplement
to any doctor's library.



It costs very little
to run reprints —
write us for prices

Norfolk Printing Co., Inc.

118 North Fifth
NORFOLK, NEBRASKA 68701

Letterheads - Statements
Envelopes - Office Forms
Quality Printing at the Right Price

ADVICE TO AUTHORS

Manuscripts should be submitted in duplicate to the Editor at the following address: Alan D. Forker, M.D., 5505 Ellendale Road, Lincoln, Nebraska 68510. The manuscript should be typewritten, double-spaced, on 8½ x 11 in. paper, with generous margins on each page. Number all pages in the right upper corner with the author's surname.

Review articles will be considered, and should generally be limited to less than 4,000 words and approximately 30 references.

Manuscripts describing original clinical or laboratory research should be limited to 2,000 words and approximately 20 references.

Acknowledgements must be given when material from other publications is included. Provide names of authors, title of article, title of journal or book, volume number, pages, month and year, and publisher's permission to reprint.

Always send a covering letter or letter of transmittal with each manuscript, and refer to the manuscript by its title, in the letter and all correspondence. Do not send a manuscript that was published elsewhere.

Title page: each manuscript should have a title page, including the full name, academic degree, and hospital or university affiliation of each author. A name and address for reprint requests should be included on the title page, including street address, city, state, and zip code.

Summary for article: all major scientific articles should be accompanied by a summary at the end of the article, summarizing the key information and recommendations presented.

References: should be listed in the order in which they appear in the article and should be typed double-spaced. Authors are responsible for the completeness and accuracy of all cited references. Journal references should include authors' names and initials, title of article, abbreviated name of Journal (as listed in Index Medicus), volume number, inclusive pages, and year of publication. References to books should include authors, title, location and name of publisher, year of publication, edition, and page numbers.

Tables and illustrations: should be typed double-spaced on separate sheets of 8½ x 11 in. paper. Each Table should have a title. Illustrations should be prepared professionally and submitted as high-quality, glossy, unmounted black-and-white photographic prints, at least 5 x 7 in. Do not send original artwork. Each illustration should be consecutively numbered and cited in the text. Each photograph should have a gummed label on the back containing the figure number, name of senior author and an arrow indicating top of figure. Legends should be typed double-space for each illustration. Permission to reproduce a picture of a patient is needed, if such a picture is included.

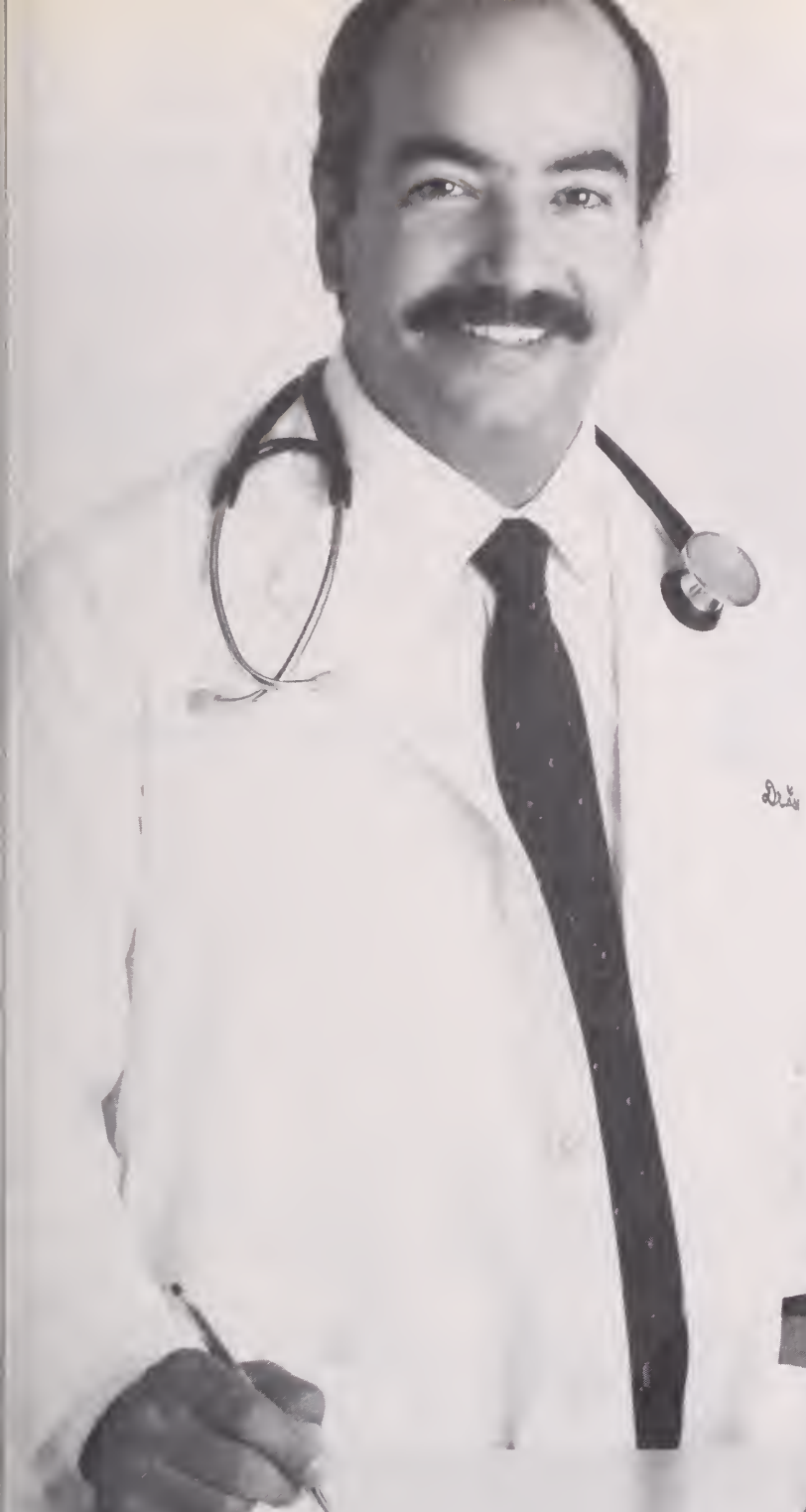
Letters-to-the-Editor: letters are encouraged by all readers and will be published as space permits and at the discretion of the Editor. All letters should be accompanied by the notation: For publication. Galley proofs generally will not be returned to the authors pre-publication.

Manuscripts will be published in the order in which they are received, particularly in the order in which galley proofs are returned from the authors. The Editor of this Journal assumes no responsibility for opinions and claims expressed in an article published in this Journal.

Reprints should be ordered from the printer, Norfolk Printing Company, Inc., P.O. Box 278, Norfolk, Nebraska 68701.



**NEBRASKA
MEDICAL ASSOCIATION
119th Annual Session
April 24-28, 1987
CORNHUSKER HOTEL
Lincoln, Nebraska**



I made the right choice.

I was looking for a group with
priorities that match mine.

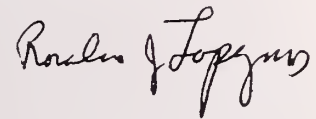
I wanted to work with people who
put the patient ahead of the illness.

I wanted quality consultants.

I wanted a long-term future with
a young clinic, where I can grow
with the practice.

And I wanted to dedicate my
time to practicing medicine, not
financial managing.

At Mullikin Medical Centers,
I found everything I was
looking for.



Rosalio J. Lopez, M.D.



Week #1:

I joined and was immediately
enrolled in health, dental
and malpractice insurance
programs.

Year #1:

My income reflected my
productivity. I was more than
satisfied.

Year #2:

I became a partner, with all
the benefits. And none of the
management headaches.

If you're looking for this kind of opportunity, call Associate
Administrator, Bill Shaw at 213 860 6611, or send Bill your
curriculum vitae, at Mullikin Medical Centers, 17821 South
Pioneer Boulevard, Artesia, CA 90701.

See how our priorities match your own.

See the classified ad in this publication.

Mullikin Medical Centers

California's neighborhood doctor for more than 25 years.

In ten years your
malpractice carrier may
be just a memory.

**PROFESSIONAL
LIABILITY
INSURANCE
CO.**

Unless it's Medical Protective.

The most important thing an insurance company sells is its promise to be here when you need help. Unfortunately, that's a promise that's easy to make, but hard to keep.

When you consider liability insurance, remember this. A company that's survived tough times before is more likely to come through a crisis period. And no company has weathered more of the industry's tough times than The Medical Protective Company because we pioneered professional liability coverage nearly a century ago.

For more information contact your Medical Protective Company general agent. He'll be here when you need him.

**THE
MEDICAL PROTECTIVE COMPANY**
FORT WAYNE, INDIANA

L. Roger Garner, Suite 114, Corporate Plaza, 11212 Davenport, Omaha, NE 68154, (402) 334-9689



Jerald R. Schenken, M.D.

**Hear Your
AMA BOARD OF TRUSTEES
REPRESENTATIVE
JERALD R. SCHENKEN, M.D.**

When he will address the
Socio-Economic Breakfast Meeting
on Tuesday, April 28.

★ ★ ★ ★ ★

**NMA ANNUAL SESSION
April 24-28
Cornhusker Hotel
Lincoln, NE**

Reservation forms will be sent in late March.

To show you how many
hypertensives stayed on

INDERAL[®] LA
(PROPRANOLOL HCl)

after a major nationwide trial...



An aerial photograph of a large, modern stadium at night. The stadium is filled with a large crowd of spectators. The football field is visible in the center, with players on the pitch. The stadium's architecture features a large, curved roof and multiple tiers of seating. The surrounding area includes parking lots with several cars and a road with a few vehicles. In the background, there are hills and some residential buildings under a twilight sky.

...we had
to find
just the
right room.

60,073 patients (90%) who started on INDERAL[®] LA stayed on INDERAL LA.^{1*}

Surprising? Not really.

Because most patients on INDERAL LA (propranolol HCl) don't even know it's working.

A recent double-blind, placebo-controlled, crossover study in 138 hypertensive patients² revealed that INDERAL LA has a side effects profile unsurpassed by atenolol or metoprolol — which shows how well-tolerated once-daily INDERAL LA can be.

Sole therapy or concomitant therapy?

Fifty-nine percent of the time, INDERAL LA stood on its own.

The patients in the nationwide compliance trial were no different from yours. Generally when the antihypertensive regimen is complicated, compliance may become a problem. So, the effectiveness of INDERAL LA as once-daily monotherapy is a big plus. Of the remaining hypertensives in the program, 36% were controlled merely with the addition of a diuretic to INDERAL LA.

For the noncompliant patients in your practice, INDERAL LA may well be the answer.

Almost 20,000 of the patients in the nationwide compliance trial were identified as having been noncompliant with their previous antihypertensive therapy. Their physicians reported that 88% showed improved compliance when placed on once-daily INDERAL LA.

Control, comfort, and compliance

ONCE-DAILY
INDERAL[®] LA
(PROPRANOLOL HCl) LONG ACTING CAPSULES

Like conventional INDERAL Tablets, INDERAL LA should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree, and bronchial asthma.

*After a 30-day trial with INDERAL LA, physicians reported that 90% of the patients would remain on INDERAL LA.

The one you know best keeps looking better

Please see next page for brief summary of prescribing information.

The one you know best keeps looking better

BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR)

INDERAL® LA brand of propranolol hydrochloride (Long Acting Capsules)

DESCRIPTION. Inderal LA is formulated to provide a sustained release of propranolol hydrochloride. Inderal LA is available as 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. Inderal LA is a nonselective beta-adrenergic receptor blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by Inderal LA, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with Inderal LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of Inderal tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg for mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to Inderal LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, Inderal LA has been therapeutically equivalent to the same mg dose of conventional Inderal, as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. Inderal LA can provide effective beta blockade for a 24-hour period.

The mechanism of the antihypertensive effect of Inderal has not been established. Among the factors that may be involved in contributing to the antihypertensive action are (1) decreased cardiac output, (2) inhibition of renin release by the kidneys, and (3) diminution of tonic sympathetic nerve outflow from vasomotor centers in the brain. Although total peripheral resistance may increase initially, it readjusts to or below the pretreatment level with chronic use. Effects on plasma volume appear to be minor and somewhat variable. Inderal LA has been shown to cause a small increase in serum potassium concentration when used in the treatment of hypertensive patients.

In angina pectoris, propranolol generally reduces the oxygen requirement of the heart at any given level of effort by blocking the catecholamine-induced increases in the heart rate, systolic blood pressure, and the velocity and extent of myocardial contraction. Propranolol may increase oxygen requirements by increasing left ventricular fiber length, end diastolic pressure and systolic ejection period. The net physiologic effect of beta-adrenergic blockade is usually advantageous and is manifested during exercise by delayed onset of pain and increased work capacity.

In dosages greater than required for beta blockade, Inderal LA also exerts a quinidine-like or anesthetic-like membrane action which affects the cardiac action potential. The significance of the membrane action in the treatment of arrhythmias is uncertain.

The mechanism of the antimigraine effect of propranolol has not been established. Beta-adrenergic receptors have been demonstrated in the pial vessels of the brain.

Beta receptor blockade can be useful in conditions in which, because of pathologic or functional changes, sympathetic activity is detrimental to the patient. But there are also situations in which sympathetic stimulation is vital. For example, in patients with severely damaged hearts, adequate ventricular function is maintained by virtue of sympathetic drive which should be preserved. In the presence of AV block, greater than first degree, beta blockade may prevent the necessary facilitating effect of sympathetic activity on conduction. Beta blockade results in bronchial constriction by interfering with adrenergic bronchodilator activity which should be preserved in patients subject to bronchospasm.

Propranolol is not significantly dialyzable.

INDICATIONS AND USAGE. Hypertension: Inderal LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. Inderal LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: Inderal LA is indicated for the long-term management of patients with angina pectoris.

Migraine: Inderal LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: Inderal LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. Inderal LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. Inderal LA is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with Inderal LA.

WARNINGS. CARDIAC FAILURE. Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or Inderal LA should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of Inderal therapy. Therefore, when discontinuance of Inderal LA is planned the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If Inderal therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute Inderal therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema) — PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. Inderal LA should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY. The necessity or desirability of withdrawal of beta-blocking therapy prior

to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, e.g., dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA. Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia in labile insulin-dependent diabetes. In these patients, it may be more difficult to adjust the dosage of insulin.

THYROTOXICOSIS. Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case, this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. General. Propranolol should be used with caution in patients with impaired hepatic or renal function. Inderal (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenergic receptor blockade can cause reduction of intraocular pressure. Patients should be told that Inderal may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

Clinical Laboratory Tests. Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS. Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if Inderal is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncope, attacks, or orthostatic hypotension.

Carcinogenesis, Mutagenesis, Impairment of Fertility. Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

Pregnancy. Pregnancy Category C. Inderal has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. Inderal should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. Inderal is excreted in human milk. Caution should be exercised when Inderal is administered to a nursing woman.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: bradycardia, congestive heart failure, intensification of AV block, hypotension, paresthesia of hands, thrombocytopenic purpura, arterial insufficiency, usually of the Raynaud type.

Central Nervous System: lightheadedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to cataplexy, visual disturbances, hallucinations, an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometric tests.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune. In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: alopecia, LE-like reactions, psoriasisiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (propranolol) have not been associated with propranolol.

DOSEAGE AND ADMINISTRATION. Inderal LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from Inderal tablets to Inderal LA capsules, care should be taken to assure that the desired therapeutic effect is maintained. Inderal LA should not be considered a simple mg for mg substitute for Inderal. Inderal LA has different kinetics and produces lower blood levels. Retitration may be necessary especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION — Dosage must be individualized. The usual initial dosage is 80 mg Inderal LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood-pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS — Dosage must be individualized. Starting with 80 mg Inderal LA once daily, dosage should be gradually increased at three to seven day intervals until optimum response is obtained. Although individual patients may respond at any dosage level, the average optimum dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE — Dosage must be individualized. The initial oral dose is 80 mg Inderal LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimum migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximum dose, Inderal LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS — 80-160 mg Inderal LA once daily.

PEDIATRIC DOSAGE — At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

REFERENCES:

1. Inderal LA National Compliance Evaluation Program. Data on file, Ayerst Laboratories.
2. Ravid M, Lang R, Jutrin I. The relative antihypertensive potency of propranolol, oxprenolol, atenolol, and metoprolol given once daily. *Arch Intern Med* 1985; 145:1321-1323.

6412 187

Ayerst AYERST LABORATORIES
New York, NY 10017

© 1986 Ayerst Laboratories

WILLIAM M. CAMERON, M.D.
38 EAST HIGH ST.

For _____

R

*Herpecin-L
Lip Balm
Sig: q. h.
as needed*

HERPECIN-L®

In Nebraska HERPECIN-L is available at all *Keystone, Osco and Walgreens* and other select pharmacies.

ATTENTION NON-PARTICIPATING PHYSICIANS!

Concerned about all of those
"MAXIMUM ALLOWABLE ACTUAL CHARGES?"

AUTO-MED INC. presents software for your IBM-PC or
Compatible that will calculate the "M.A.A.C." for you.

MAAC can generate the REQUIRED LETTER
you must send to certain patients about your charges.

**BEST OF ALL THE SUPPLIED FLOPPY DISK &
INSTRUCTIONS ARE ONLY \$49.95**

ORDER NOW! Send Check for \$49.95 plus \$2.95 shipping

Name: _____

Address: _____

City: _____ **AUTO-MED INC.**

State: _____ Zip: _____

1922 South 149th Circle
Omaha, Nebraska 68144



**Dates To Reserve
For 1987**

April 24, 25, 26, 27, 28

NMA ANNUAL SESSION

**Cornhusker Hotel
Lincoln, Nebraska**

AIM HIGH

A PRESCRIPTION FOR PHYSICIANS

BOTHERED BY:

- ★ Too much paperwork?
- ★ The burden of office overhead?
- ★ Malpractice insurance costs?
- ★ Not enough time for the family?
- ★ No time to keep current with technology and new methods?
- ★ No time or money for professional development?

JOIN THE AIR FORCE MEDICAL TEAM; WE'LL PROVIDE THE FOLLOWING:

- ★ Competent and dedicated professional staff.
- ★ Time for patients and for keeping professionally current.
- ★ Financial security, a generous retirement for those who qualify.
- ★ If qualified, unlimited professional development.
- ★ Medical facilities all around the world.
- ★ 30 days of vacation with pay each year.
- ★ Complete medical and dental care.
- ★ Low cost life insurance.

Want to find out more? Contact your nearest Air Force recruiter for information at no obligation. Call

MSgt Robert D. Pond
(402) 556-0715



ORGANIZATIONS, STATE

American Cancer Society, Nebraska Division, Inc.

Don W. McClure, Exec. Vice President
8502 West Center Rd., P.O. Box 241255, Omaha 68124-5255

American Diabetes Association — Nebraska Affiliate, Inc.

Ron Van Ryswyk, Executive Director
7377 Pacific St., Ste. 216A, Omaha 68114

American Heart Association, Nebraska Affiliate

Dennis N. Nissen, Executive Director
3624 Farnam St., Omaha 68131

American Lung Association of Nebraska

8901 Indian Hills Dr., Ste. 107, Omaha 68114

American Red Cross

P.O. Box 83267
1701 "E" St., Lincoln 68501

Arthritis Foundation, Nebraska Chapter, Inc.

Mrs. Ellen Wright, Exec. Director
2229 N. 91st Court, Omaha 68134

Blue Cross and Blue Shield of Nebraska

Wm. H. Heavey, President
P.O. Box 3248, Main Station, Omaha 68180

Creighton University School of Medicine

Richard O'Brien, M.D., Dean
California at 24th St., Omaha 68178

Cystic Fibrosis Foundation, Nebraska Chapter

Charles R. Bercaw, Exec. Director
5017 Leavenworth St., Omaha 68106

Dairy Council of Central States, Inc.

Suite 103, Hillcrest Bldg.
76th & Main, Ralston 68127

Division of Rehabilitation Services

Nebraska Department of Education
6th Floor, 301 Centennial Mall South, Lincoln 68509

Division of Rehabilitation Services for the Visually Impaired

James S. Nyman, Ph.D., Director
4600 Valley Road, Lincoln 68510

Easter Seal Society of Nebraska

Mrs. Letitia K. Simmons, Executive Director
3015 North 90th St., #6, Omaha 68134

Health Manpower Referral Service, State of Nebraska

3rd Floor, State Office, 301 Centennial Mall South, Lincoln 68509

Lincoln Council on Alcoholism and Drugs, Inc.

Room 212, 215 Centennial Mall, Lincoln 68508

March of Dimes — Birth Defects Foundation

1618 L Street, Lincoln 68508

MID-PLAINS POISON CONTROL CENTER

Childrens Memorial Hospital, 8301 Dodge St., Omaha 68114
(402) 390-5400 or 800-642-9999 (toll free Nebraska)

Missouri Valley Dermatologic Society

Richard Q. Crotty, M.D., Secretary
7822 Davenport St., Omaha 68114

Muscular Dystrophy Association

1912 No. 90th St., Lower Level, Omaha 68114

National Kidney Foundation of Nebraska

Karen Engelsman, Executive Director
2217 No. 91st Plaza, Omaha 68134
(402) 397-9234 — NE toll free 800-642-1255

National Multiple Sclerosis Society — Nebraska-Iowa

Midlands Chapter
3624 Leavenworth, Omaha 68105

National Society to Prevent Blindness, Nebraska Affiliate

120 North 69th St., Suite 203, Omaha 68132-2720

Nebraska Academy of Ophthalmology

Mylan VanNewkirk, M.D., President
329 West 40th, Scottsbluff 69361

Nebraska Academy of Otolaryngology

Michael Crawford, M.D., President
201 Ridge St., #311, Council Bluffs, IA 51501

Nebraska Allergy Society

Linda B. Ford, M.D., President
401 E. Gold Coast Rd., Papillion 68128

Nebraska Association of Medical Assistants, Inc.

Marie Madison, President
405 East Stolley Park Rd., Grand Island 68801

Nebraska Association of Nuclear Physicians, Inc.

Merton A. Quaife, M.D., President
Dept. of Radiology, UNMC - 42nd & Dewey Ave., Omaha 68105

Nebraska Association of Pathologists

Joseph Rapoport, M.D., President
6901 No. 72nd St., Omaha 68122

Nebraska Chapter — American Academy of Family Physicians

David H. Filipi, M.D., Secretary-Treasurer
Mrs. Phyllis G. Hansen, Executive Secretary
River City Office Park, #202, 401 N. 117th, Omaha 68154

Nebraska Chapter — American Academy of Physician Assistants

John Ries, PA-C, President
1101 N. 50th, Omaha 68132

Nebraska Chapter — American Academy of Pediatrics

H. J. Kuehn, M.D., Chairman
8300 Dodge St., #219, Omaha 68114

Nebraska Chapter — American College of Emergency Physicians

Richard L. Keller, M.D., President
9641 No. 29th, Omaha 68112

Nebraska Chapter — American College of Physicians

Frederick F. Paustian, M.D., F.A.C.P., Governor
UNMC - 42nd & Dewey Ave., Omaha 68105

Nebraska Chapter — American College of Surgeons

Louis J. Gogela, M.D., Past President
2221 South 17th St., Lincoln 68502

Nebraska Chapter of Myasthenia Gravis Foundation

John F. Aita, M.D., Medical Advisor
105 So. 49th St., Omaha 68132

Nebraska Dental Association

Barry Ross, Executive Director
134 So. 13th St., Suite 1007, Lincoln 68508

Nebraska Dietetic Association

Linda O. Young, M.S., R.D., President
University of NE - 214 Ruth, Levertown Hall, Lincoln 68503

Nebraska Health Care Association

Sandra H. Hockley, Executive Director
3100 "O" St., Ste. 7, Lincoln 68510

Nebraska Hospital Association

Harlan Heald, President
Box 94833, 1335 "L" St., Lincoln 68509

Nebraska League for Nursing

Priscilla Allen, R.N., President
Box 126, Daykin 68338

Nebraska Medical Association

William L. Schellpeper, Executive Director
1512 First Tier Bank Bldg., Lincoln 68508

Nebraska Medical Foundation

William L. Schellpeper, Secretary
1512 First Tier Bank Bldg., Lincoln 68508

Nebraska Nurses Association

Mary Ann Sak, Executive Director
Suite 711, Terminal Bldg., Lincoln 68508

Nebraska Orthopaedic Society

Ronald Schwab, M.D., Secretary
2300 South 13th St., Lincoln 68502

Nebraska Perinatal Organization

Joy Jacobs, R.N., Secretary-Treasurer
St. Elizabeth Community Health Center - Labor & Del. Dpt.,
566 So. 70th St., Lincoln 68510

Nebraska Pharmacists Association

Tom R. Dolan, R.P., Executive Director
600 So. 12th, Lincoln 68508

Nebraska Psychiatric Society, District Branch of the

American Psychiatric Association
John Y. Donaldson, M.D., President
6901 No. 72nd St., Omaha 68122

Nebraska Public Health Association

President, N.P.H.A.
P.O. Box 94813, Lincoln 68509

Nebraska Radiological Society

Joseph C. Anderson, M.D., President
Dept. of Radiology, UNMC - 42nd & Dewey, Omaha 68105

Nebraska Rheumatism Association

Arthur L. Weaver, M.D., President
2121 South 56th St., Lincoln 68506

Nebraska Section, American College of

Obstetricians & Gynecologists
Larry E. Roffman, M.D.
800 Doctors Bldg., Omaha 68131

Nebraska Society of Anesthesiologists

K. Reed Peters, M.D., President
1512 First Tier Bank Bldg., Lincoln 68508

Nebraska Society of Internal Medicine

Vernon Garwood, M.D., President
120 Wedgewood Drive, Suite A, Lincoln 68510

Nebraska Society for Respiratory Therapy

Lynn Lamprecht, RRT, President
Mem. Hospital of Dodge Co., 450 E. 23rd St.

Nebraska State Department of Health

Gregg Wright, M.D., Director of Health
P.O. Box 95007, 301 Centennial Mall South, Lincoln 68509

Nebraska State Obstetric and Gynecology Society

Dennis D. Beavers, M.D., Secretary-Treasurer
720 No. 87th St., Omaha 68114

Nebraska Stroke Foundation

Karyl Newman, President
P.O. Box 67004, Lincoln 68506

Nebraska Urological Association

Charles F. Damico, M.D., F.A.C.S., President
2115 No. Kansas, Hastings 68901

Nebraska Veterinary Medical Association

Don Ellerbee, Executive Director
209 West 9th St., Hastings 68901

Omaha Mid-West Clinical Society

Ms. Lorraine E. Seibel, Executive Secretary
7363 Pacific St., #205-B, Omaha 68114

United Cerebral Palsy of Lancaster County, Inc.

Jane Hoffart, Client Services Rep.
P.O. Box 80103, Lincoln 68501

University of Nebraska Medical Center

Charles E. Andrews, M.D., Chancellor
42nd & Dewey Ave., Omaha 68105

Before prescribing, see complete prescribing information in SK&F CO. literature or *PDR*. The following is a brief summary.

WARNING

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. Associated widened QRS complex or arrhythmia requires prompt additional therapy. Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.

Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium; use with caution with 'Dyazide'. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin (ACTH)). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function. Thiazides may add to or potentiate the action of other antihypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.

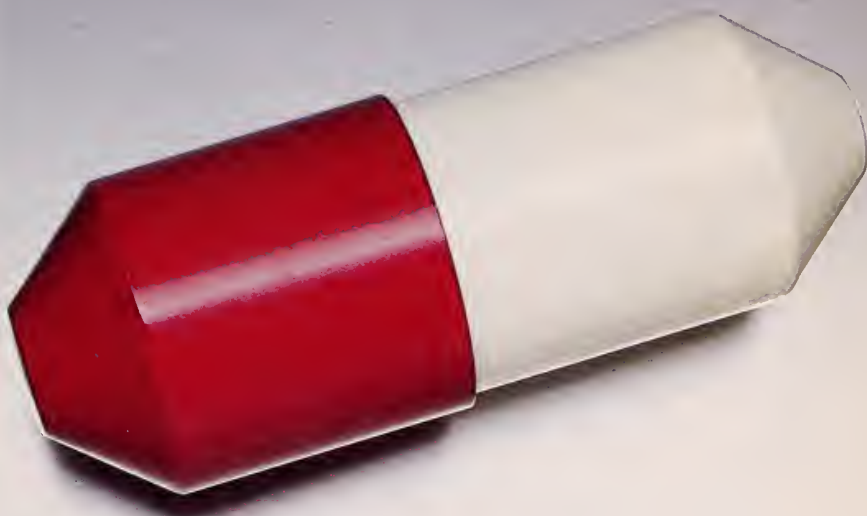
Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak™ unit-of-use bottles of 100.

BRS-DZ:L42

In Hypertension*... When You Need to Conserve K^+

Remember the Unique Red and White Capsule: Your Assurance of SK&F Quality

Serum K^+ and BUN should be checked periodically (see Warnings and Precautions).



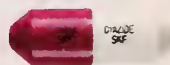
Potassium-Sparing

DYAZIDE®

25 mg Hydrochlorothiazide/50 mg Triamterene/SKF

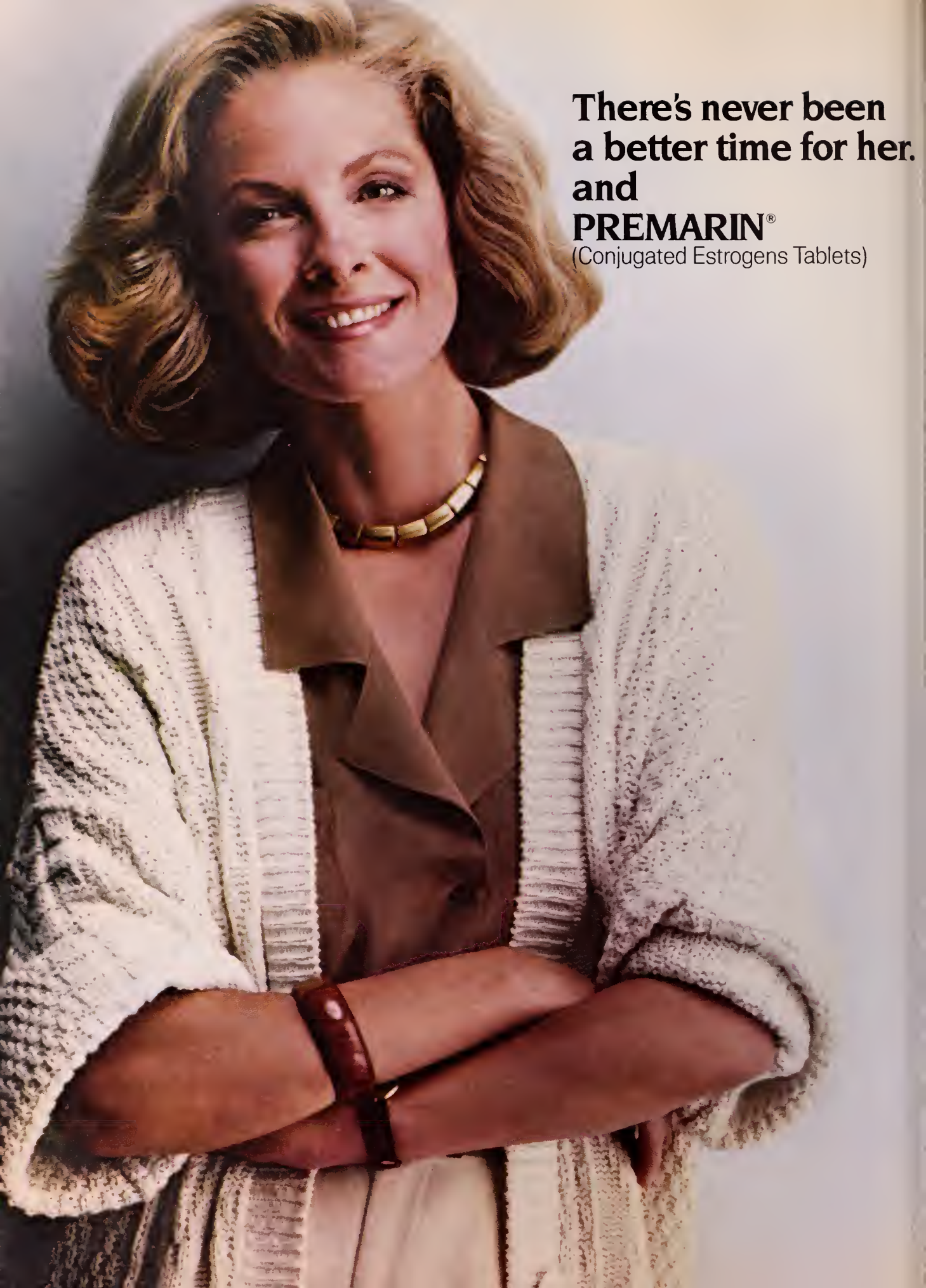
Over 20 Years of Confidence

The unique
red and white
Dyazide® capsule:
Your assurance of
SK&F quality.



a product of
SK&F CO.

Carolina, P.R. 00630



**There's never been
a better time for her.
and
PREMARIN[®]**
(Conjugated Estrogens Tablets)

Now the evidence looks better than ever

Significantly reduced risk of endometrial hyperplasia

Endometrial hyperplasia was significantly reduced when progestin was added to PREMARIN therapy for more than ten days a month.¹⁻⁴ The risk of endometrial hyperplasia may also be reduced through cyclic administration of unopposed, low-dose PREMARIN.

Effect on lipids—an important feature

PREMARIN used alone does not adversely affect lipid levels. In fact, a clinical study has shown a significant increase in HDL cholesterol—from 49.7 mg/dL to 56.4 mg/dL—and decrease in LDL cholesterol—from 165.1 mg/dL to 138.1 mg/dL—after one year of therapy with PREMARIN, 0.625 mg.⁵

Low-dose control of menopausal symptoms*

PREMARIN effectively relieves vasomotor symptoms, such as hot flashes. When estrogen deficiency is limited to atrophic vaginitis, PREMARIN® (conjugated estrogens) Vaginal Cream restores the vaginal environment to its premenopausal state.

The most widely used, most extensively studied estrogen worldwide.

PREMARIN®
(Conjugated Estrogens Tablets)

Most trusted for more reasons

*PREMARIN is indicated for moderate-to-severe vasomotor symptoms.

Please see following page for brief summary of prescribing information.

For moderate-to-severe
vasomotor symptoms

PREMARIN® (Conjugated Estrogens Tablets)



0.3 mg 0.625 mg 0.9 mg 1.25 mg 2.5 mg

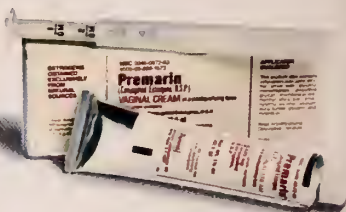
The appearance of these tablets is a trademark of Ayerst Laboratories.

For atrophic vaginitis

PREMARIN® (Conjugated Estrogens)

Vaginal
Cream

0.625mg/g



BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION AND PATIENT INFORMATION, SEE PACKAGE CIRCULARS.)

PREMARIN® Brand of conjugated estrogens tablets, USP

PREMARIN® Brand of conjugated estrogens Vaginal Cream in a nonliquefying base

1 ESTROGENS HAVE BEEN REPORTED TO INCREASE THE RISK OF ENDOMETRIAL CARCINOMA

Three independent case control studies have reported an increased risk of endometrial cancer in postmenopausal women exposed to exogenous estrogens for more than one year. This risk was independent of the other known risk factors for endometrial cancer. These studies are further supported by the finding that incidence rates of endometrial cancer have increased sharply since 1969 in eight different areas of the United States with population-based cancer reporting systems, an increase which may be related to the rapidly expanding use of estrogens during the last decade. The three case control studies reported that the risk of endometrial cancer in estrogen users was about 4.5 to 13.9 times greater than in nonusers. The risk appears to depend on both duration of treatment and on estrogen dose. In view of these findings, when estrogens are used for the treatment of menopausal symptoms, the lowest dose that will control symptoms should be utilized and medication should be discontinued as soon as possible. When prolonged treatment is medically indicated, the patient should be reassessed on at least a semiannual basis to determine the need for continued therapy. Although the evidence must be considered preliminary, one study suggests that cyclic administration of low doses of estrogen may carry less risk than continuous administration; if therefore appears prudent to utilize such a regimen. Close clinical surveillance of all women taking estrogens is important. In all cases of undiagnosed persistent or recurring abnormal vaginal bleeding, adequate diagnostic measures should be undertaken to rule out malignancy. There is no evidence at present that "natural" estrogens are more or less hazardous than "synthetic" estrogens at equiestrogenic doses.

2. ESTROGENS SHOULD NOT BE USED DURING PREGNANCY

The use of female sex hormones, both estrogens and progestogens, during early pregnancy may seriously damage the offspring. It has been shown that females exposed in utero to diethylstilbestrol, a non-steroidal estrogen, have an increased risk of developing in later life a form of vaginal or cervical cancer that is ordinarily extremely rare. This risk has been estimated as not greater than 4 per 1,000 exposures. Furthermore, a high percentage of such exposed women (from 30% to 90%) have been found to have vaginal adenosis, epithelial changes of the vagina and cervix. Although these changes are histologically benign, it is not known whether they are precursors of malignancy. Although similar data are not available with the use of other estrogens, it cannot be presumed they would not induce similar changes. Several reports suggest an association between intrauterine exposure to female sex hormones and congenital anomalies, including congenital heart defects and limb reduction defects. One case control study estimated a 4-7-fold increased risk of limb reduction defects in infants exposed in utero to sex hormones (oral contraceptives, hormone withdrawal tests for pregnancy, or attempted treatment for threatened abortion). Some of these exposures were very short and involved only a few days of treatment. The data suggest that the risk of limb reduction defects in exposed fetuses is somewhat less than 1 per 1,000. In the past, female sex hormones have been used during pregnancy in an attempt to treat threatened or habitual abortion. There is considerable evidence that estrogens are ineffective for these indications, and there is no evidence from well controlled studies that progestogens are effective for these uses. If PREMARIN is used during pregnancy, or if the patient becomes pregnant while taking this drug, she should be apprised of the potential risks to the fetus, and the advisability of pregnancy continuation.

DESCRIPTION: PREMARIN (conjugated estrogens, USP) contains a mixture of estrogens, obtained exclusively from natural sources, blended to represent the average composition of material derived from pregnant mares urine. It contains estrone, equilin, and 17 α -dihydroequilin, together with smaller amounts of 17 α -estradiol, equilin, and 17 α -dihydroequilin as salts of their sulfate esters. Tablets are available in 0.3 mg, 0.625 mg, 0.9 mg, 1.25 mg, and 2.5 mg strengths of conjugated estrogens. Cream is available as 0.625 mg conjugated estrogens per gram.

INDICATIONS AND USAGE: PREMARIN (conjugated estrogens tablets, USP): Moderate-to-severe vasomotor symptoms associated with the menopause. (There is no evidence that estrogens are effective for nervous symptoms or depression without associated vasomotor symptoms and they should not be used to treat such conditions.) Osteoporosis (abnormally low bone mass). Atrophic vaginitis. Kraurosis vulvae. Female castration.

PREMARIN (conjugated estrogens) Vaginal Cream is indicated in the treatment of atrophic vaginitis and kraurosis vulvae. PREMARIN HAS NOT BEEN SHOWN TO BE EFFECTIVE FOR ANY PURPOSE DURING PREGNANCY AND ITS USE MAY CAUSE SEVERE HARM TO THE FETUS (SEE BOXED WARNING).

Concomitant Progesterin Use: The lowest effective dose appropriate for the specific indication should be utilized. Studies of the addition of a progestin for 7 or more days of a cycle of estrogen administration have reported a lowered incidence of endometrial hyperplasia. Morphological and biochemical studies of the endometrium suggest that 10 to 13 days of progestin are needed to provide maximal maturation of the endometrium and to eliminate any hyperplastic changes. Whether this will provide protection from endometrial carcinoma has not been clearly established. There are possible additional risks which may be associated with the inclusion of progestin in estrogen replacement regimens. (See PRECAUTIONS.) The choice of progestin and dosage may be important; product labeling should be reviewed to minimize possible adverse effects.

CONTRAINDICATIONS: Estrogens should not be used in women (or men) with any of the following conditions. 1. Known or suspected cancer of the breast except in appropriately selected patients being treated for metastatic disease. 2. Known or suspected estrogen-dependent neoplasia. 3. Known or suspected pregnancy (See Boxed Warning). 4. Undiagnosed abnormal genital bleeding. 5. Active thrombophlebitis or thromboembolic disorders. 6. A past history of thrombophlebitis, thrombosis, or thromboembolic disorders associated with previous estrogen use (except when used in treatment of breast or prostatic malignancy).

WARNINGS: Long-term continuous administration of natural and synthetic estrogens in certain animal species increases the frequency of carcinomas of the breast, cervix, vagina, and liver. There are now reports that estrogens increase the risk of carcinoma of the endometrium in humans. (See Boxed Warning.) At the present time there is no satisfactory evidence that estrogens given to postmenopausal women increase the risk of cancer of the breast, although a recent study has raised this possibility. There is a need for caution in prescribing estrogens for women with a strong family history of breast cancer or who have breast nodules, fibrocystic disease, or abnormal mammograms. A recent study has reported a 2- to 3-fold increase in the risk of surgically confirmed gallbladder disease in women receiving postmenopausal estrogens.

Adverse effects of oral contraceptives may be expected at the larger doses of estrogen used to treat prostatic or breast cancer or postpartum breast engorgement. It has been shown that there is an increased risk of thrombosis in men receiving estrogens for prostatic cancer and women for postpartum breast engorgement. Users of oral contraceptives have an increased risk of diseases, such as thrombophlebitis, pulmonary embolism, stroke, and myocardial infarction. Cases of retinal thrombosis, mesenteric thrombosis, and optic neuritis have been reported in oral contraceptive users. An increased risk of postsurgical thromboembolic complications has also been reported in users of oral contraceptives. If feasible, estrogen should be discontinued at least 4 weeks before surgery of the type associated with an increased risk of thromboembolism, or during periods of prolonged immobilization. Estrogens should not be used in persons with active thrombophlebitis, thromboembolic disorders, or in persons with a history of such disorders in association with estrogen use. They should be used with

caution in patients with cerebral vascular or coronary artery disease. Large doses (5 mg conjugated estrogens per day), comparable to those used to treat cancer of the prostate and breast, have been shown to increase the risk of nonfatal myocardial infarction, pulmonary embolism and thrombophlebitis. When doses of this size are used, any of the thromboembolic and thrombotic adverse effects should be considered a clear risk.

Benign hepatic adenomas should be considered in estrogen users having abdominal pain and tenderness, abdominal mass, or hypovolemic shock. Hepatocellular carcinoma has been reported in women taking estrogen-containing oral contraceptives. Increased blood pressure may occur with use of estrogens in the menopause and blood pressure should be monitored with estrogen use. A worsening of glucose tolerance has been observed in patients on estrogen-containing oral contraceptives. For this reason, diabetic patients should be carefully observed. Estrogens may lead to severe hypercalcemia in patients with breast cancer and bone metastases.

PRECAUTIONS: Physical examination and a complete medical and family history should be taken prior to the initiation of any estrogen therapy with special reference to blood pressure, breasts, abdomen, and pelvic organs, and should include a Papanicolaou smear. As a general rule, estrogen should not be prescribed for longer than one year without another physical examination being performed. Conditions influenced by fluid retention such as asthma, epilepsy, migraine, and cardiac or renal dysfunction, require careful observation. Certain patients may develop manifestations of excessive estrogenic stimulation, such as abnormal or excessive uterine bleeding, mastodynia, etc. Prolonged administration of unopposed estrogen therapy has been reported to increase the risk of endometrial hyperplasia in some patients. Oral contraceptives appear to be associated with an increased incidence of mental depression. Patients with a history of depression should be carefully observed. Preexisting uterine leiomyomata may increase in size during estrogen use. The pathologist should be advised of estrogen therapy when relevant specimens are submitted. If jaundice develops in any patient receiving estrogen, the medication should be discontinued while the cause is investigated. Estrogens should be used with care in patients with impaired liver function, renal insufficiency, metabolic bone diseases associated with hypercalcemia, or in young patients in whom bone growth is not complete. If concomitant progestin therapy is used, potential risks may include adverse effects on carbohydrate and lipid metabolism.

The following changes may be expected with larger doses of estrogen:

- Increased sulfobromophthalalein retention.
- Increased prothrombin and factors VII, VIII, IX, and X, decreased antithrombin 3; increased norepinephrine-induced platelet aggregability.
- Increased thyroid binding globulin (TBG) leading to increased circulating total thyroid hormone, as measured by PBI, T4 by column, or T4 by radioimmunoassay. Free T3 resin uptake is decreased, reflecting the elevated TBG; free T4 concentration is unaltered.
- Impaired glucose tolerance.
- Decreased pregnandiol excretion.
- Reduced response to methylparagon test.
- Reduced serum tolact concentration.
- Increased serum triglyceride and phospholipid concentration. As a general principle, the administration of any drug to nursing mothers should be done only when clearly necessary since many drugs are excreted in human milk.

ADVERSE REACTIONS: The following have been reported with estrogenic therapy, including oral contraceptives: breakthrough bleeding, spotting, change in menstrual flow, dysmenorrhea; premenstrual-like syndrome, amenorrhea during and after treatment; increase in size of uterine fibromyomata; vaginal candidiasis; change in cervical erosion and in degree of cervical secretion; cystitis-like syndrome; tenderness, enlargement, secretion (of breasts); nausea, vomiting, abdominal cramps, bloating; cholestatic jaundice; chloasma or melasma which may persist when drug is discontinued; erythema multiforme, erythema nodosum; hemorrhagic eruption; loss of scalp hair; hirsutism; steepening of corneal curvature; intolerance to contact lenses; headache, migraine, dizziness, mental depression, chorea; increase or decrease in weight; reduced carbohydrate tolerance; aggravation of porphyria; edema; changes in libido.

ACUTE OVERDOSSAGE: May cause nausea, and withdrawal bleeding may occur in females.

DOSEAGE AND ADMINISTRATION:

PREMARIN® Brand of conjugated estrogens tablets, USP

- Given cyclically for short-term use only. For treatment of moderate to severe vasomotor symptoms, atrophic vaginitis, or kraurosis vulvae associated with the menopause (0.3 to 1.25 mg or more daily). The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible. Administration should be cyclic (eg, three weeks on and one week off). Attempts to discontinue or taper medication should be made at three- to six-month intervals.
- Given cyclically. Female castration. Osteoporosis. Female castration—1.25 mg daily, cyclically. Adjust upward or downward according to response of the patient. For maintenance, adjust dosage to lowest level that will provide effective control. Osteoporosis—0.625 mg daily. Administration should be cyclic (eg, three weeks on and one week off).

Patients with an intact uterus should be monitored for signs of endometrial cancer and appropriate measures taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

PREMARIN® Brand of conjugated estrogens Vaginal Cream

Given cyclically for short-term use only. For treatment of atrophic vaginitis or kraurosis vulvae.

The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible.

Administration should be cyclic (eg, three weeks on and one week off).

Attempts to discontinue or taper medication should be made at three-to-six month intervals.

Usual dosage range: 2 to 4 g daily, intravaginally, depending on the severity of the condition.

Treated patients with an intact uterus should be monitored closely for signs of endometrial cancer and appropriate diagnostic measures should be taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

References:

- Whitehead MI, Townsend PT, Pryse-Davies J, et al: Effects of estrogens and progestins on the biochemistry and morphology of the postmenopausal endometrium. *N Engl J Med* 1981;305:1599-1605. 2. Paterson MEL, Wade-Evans T, Sturdee DW, et al: Endometrial disease after treatment with oestrogens and progestogens in the climacteric. *Br Med J* 1980;280:822-824. 3. Magos AL, Brincat M, Studd JWW, et al: Amenorrhea and endometrial atrophy with continuous oral estrogen and progestogen therapy in postmenopausal women. *Obstet Gynecol* 1985;67:496-499. 4. Whitehead MI, Lane G, Siddie N, et al: Avoidance of endometrial hyperstimulation in estrogen-treated postmenopausal women. *Semin Reprod Endocrinol* 1983;1:41-52. 5. Barnes RB, Roy S, Lobo RA: Comparison of lipid and androgen levels after conjugated estrogen or depo-medroxyprogesterone acetate treatment in postmenopausal women. *Obstet Gynecol* 1985;66:216-219.

© 1986 Ayerst Laboratories

Ayerst® AYERST LABORATORIES
New York, NY 10017

T 6194/886

THE NEBRASKA MEDICAL JOURNAL

A Computer in the Office: Yesterday, Today and Tomorrow

TO some people it may appear that computers are taking over the world. Others gamble that computers may be helpful to some but have nothing to offer me. Physicians frequently belong to one or both of these groups and, in many cases, their feelings are well justified.

In fact a computer is just a tool; it is neither good nor bad. The way in which it is employed makes the difference. Like it or not, computers have revolutionized many aspects of our lives and will continue to do so. There are already many medical innovations which would not exist except for the computer. The CT scan is probably the most obvious example. Word processing is used extensively. In many other more subtle ways the computer is interacting with our medical existence every day. It has become virtually impossible to deal with the tremendous volume of medical data which continues to grow in geometric proportions without computer assistance to store and retrieve this data. Despite this daily "behind the scenes" involvement with computers, they have, as yet, had very little impact on the essence of medical practice — patient care.

The purpose of this article is to briefly cover some of the ways in which computers have been traditionally utilized in the medical office, give some insight into new ways in which they may be employed, and speculate on what the future holds.

Up until now an office computer has been entirely a business tool. Medicine is a business, and even though we practitioners discuss whether medicine is more an art or a science, to the rest of the world it is a small business. It was a natural evolution to adapt general computer billing to medical needs. Even this has not been straight forward. The complexities of medical economics, with a multiplicity of third party payers and changing government regulations, has sometimes made office man-

D. A. DECKER, JR., M.D.

agement systems obsolete before they have been fully implemented. The addition of HMO's and PPO's has and will add further complexities. The business system of the future will have to be very adaptable and must be able to restructure accounting data to ever changing needs without rendering prior data or entire systems worthless. Scheduling systems are often available, but diversity in types and ease of use are still needed. Deficiencies in the present systems have caused many physicians to become disillusioned with computers. After investing considerable money and even more time and effort in an "office management system", they are informed that it will no longer be adequate and an entirely new system will be needed. They have been told that this is inevitable with any computer system. In fact this is simply the result of poor design and planning by developers who have not understood the ever changing complexities of American medicine. It is possible to develop systems which are adaptable and can remain viable despite multiple, as yet unforeseen, changes. Even new improved hardware and software need not render valuable previously acquired data useless.

Although there have been many deficiencies in medical business systems, the greatest deficiency is that they have done nothing to improve the quality of patient care. Medicine is far behind almost all other endeavors in utilizing the computer for data acquisition and retrieval despite the fact that it is frequently sighted as the area where this is most vitally required. I have frequently lamented to my

medical colleagues that it is appalling that an automobile manufacturer can notify owners of a possible steering deficiency in a vehicle they purchased several years ago, but we are unable to identify and warn patients of a new, potentially dangerous, side effect in a medication they are taking. It is also difficult to recall patients with a particular disorder for which there is new effective therapy which should be considered in their treatment.

With the multiplicity of medications now available it becomes a superhuman task to identify many of the drug - drug and drug - disease interactions which should be considered each time a patient's health is evaluated. Some very sophisticated programs are now available to assist in this identification, but none is incorporated into the routine office system. It is currently technically possible to enter a new medication into a computer, have the prescription produced "legibly" and within seconds be issued warnings of possible interactions.

It is the advent of new computer technology, along with a better understanding of what is required in a medical practice, which has opened the door to these advances. Microcomputers now deal with megabyte rather than kilobyte memory. Networking of many computers into single functional systems is now a reality. Multiuser systems are available so that many individuals can access and modify a single set of data without conflict. Rapid mass storage on laser discs and rapid variable printing with laser printers are realities. All of this is occurring at the same time that hardware prices continue to drop to the level where powerful office based systems are economically feasible in even a small practice.

The current system should accept a variety of coding schemes. The standard codes required by third party carriers are an economic necessity, but none really adequately define the patient's problem in many cases. More varied and specific diagnoses and even symptoms need to be available and linked to the "standard" codes. The entire gamut of test results must be incorporated into the system so that a reasonably complete picture of the patient's problem can be accessed even from a remote location such as at the physician's home, hospital, or satellite clinic. Transmission

of this data from one facility to another can be instantaneous.

All of the above require no technology which is not currently available and already in use in many other areas. Even this system has some serious deficiencies which cannot be currently solved. There is, as of this time, no efficient method for capturing the vital data included in histories and exams. This problem is being intensively addressed at several research institutions and some partial answers have appeared. On the one hand it is possible to "encode" all this data into definite predefined tokens. Once encoded this information is readily available for incorporation and manipulation by a medical information system. The problem is that the encoding is a time consuming, and potentially inaccurate representation of the facts. At best it is difficult to formulate a system which includes the richness and subtleties of a medical observation. The fine distinctions of a heart murmur, the quality of a pain, and the palpable texture of a lump are difficult concepts and will probably be ignored by such a system. At worse there may be gross errors in encoding where a single erroneous keystroke may substantially change the entire clinical picture. A more ingenuous solution is to accept free text medical input and have the computer structure it into all its essential components and allow retrieval of any piece of information. This approach is related to the large problem of encoding or "parsing" the English language in general. Rapid advances are being made but much still needs to be done. When such a system is available, verbal as well as typed input will be possible. The physician will be able to dictate just as he does now. The computer will produce a typed copy of the dictation and, at the same time, the information will be captured by the medical information system where it can be utilized in multiple ways.

So far we have been dealing with only text or "alphanumeric" data. There is no reason why graphic information should not also be included. A digitalized version of a critical x-ray, EKG strip, or even a pathology slide can all be incorporated in the patient's computer record and be available for immediate recall. It would even be possible to use such digitized information to make more accurate comparisons between serial graphic information.

I would imagine that most physicians can visualize how such a system can directly assist in patient care. I fear, however, that there are other factors which may also make the office computer a necessity. Most of us have been exposed to the voluminous data keeping which is now required by all hospitals to deal with various governmental and other agencies. DRG's alone have required almost all hospitals to acquire a computer to deal with the complexities of the system. Congress and other interested health consumer groups are already formulating similar programs for monitoring outpatient care. Without competent and efficient patient information systems it is going to be nearly impossible for any office to deal with the many informational demands. Many systems are going to spring up which will claim to solve some particular reporting requirement. It is possible to envision an office

with five separate independent systems, each designed to handle a different report. This would be catastrophic. The problem of dealing more efficiently with medical data must be dealt with as an all inclusive concept which will simultaneously assist with business and bureaucratic needs and which will, above all, improve our ability to provide the best possible patient care.

Suggested Reading

- 1) M.D. Computing Springer Verlag New York Incorp, Service Center Secaucus, 44 Hartz Way, Secaucus, New Jersey 09094.
- 2) Proceedings Aamsi Congress 1986 Anaheim CA. May 8-10th, 1986. American Assoc. for Medical Systems and Informatics Publishers, Suite 700 1101 Connecticut Ave., N.W. Washington D.C. 20036.
- 3) Proceedings of the 1986 Mumps Users Group Meeting, Mumps Users Group Publications, 4321 Hartwick Road, Suite #510 College Park, Maryland 20740.

Transcatheter Closure of Patent Ductus Arteriosus

PATENT ductus arteriosus (PDA) persisting beyond the neonatal period is the second or third most common congenital heart defect detected in childhood.¹ Until recently, the only treatment for persistent PDA was surgical ligation through a left thoracotomy. Although this procedure is one of the safest "heart" operations, general anesthesia is required and the patient is left with a thoracotomy scar for life. A transcatheter technique for PDA closure using a "double umbrella" device, the Rashkind PDA Occluder (USCI, Billerica, MA), has been under clinical evaluation in a multicenter study since 1980. The device and delivery techniques have evolved over the years of the study. The purpose of this report is to describe the experience at the University of Nebraska Medical Center with the most recent version of the Rashkind PDA Occluder between May, 1985 and June, 1986.

Patients:

Transcatheter closure of PDA was attempted in nine patients (Table I). The patients ranged in age from 8 to 94 months (median 19 months). Weights were 6.8 to 21.4 kilograms (median 8.6 kg.). The diameter of the ductus ranged from 2.5 to 7 millimeters and the pulmonary to systemic flow ratio (Q_p/Q_s) ranged from 1.1 to 2.9.

Procedure:

Because the Rashkind PDA Occluder is an investigational device, all patients were studied on a protocol approved by the University of Nebraska Institutional Review Board. One of the authors (LL) received specific training in the use of the device prior to beginning this study.

In each patient, a right heart catheterization was performed to measure the pulmonary arterial pressure and calculate the pulmonary to systemic flow ratio (Q_p/Q_s). After the hemodynamic study, an aortogram was performed to demonstrate the size, shape, and location of the PDA.

A long Mullins transseptal sheath was used

LARRY A. LATSON, M.D.*
PHILIP J. HOFSCHE, M.D.
JOHN D. KUGLER, M.D.
JOHN P. CHEATHAM, M.D.
CARL H. GUMBINER, M.D.

University of Nebraska Medical Center, Department of Pediatric Cardiology, 42nd and Dewey Avenue, Omaha, NE 68105

as a conduit to deliver the folded occluder device. An end-hole catheter was advanced from the pulmonary artery through the PDA to the descending aorta and a guide wire was left in the descending aorta as the catheter was withdrawn. The 8 French long transeptal sheath and dilator was then advanced over the guide wire and the end of the sheath was left at the aortic end of the ductus as the dilator and guide wire were removed.

The delivery catheter for the PDA Occluder was inserted through the long sheath to the level of the right ventricle. Because the metal pod at the end of this catheter is too stiff to curve in an infant's heart, the folded occluding

TABLE I

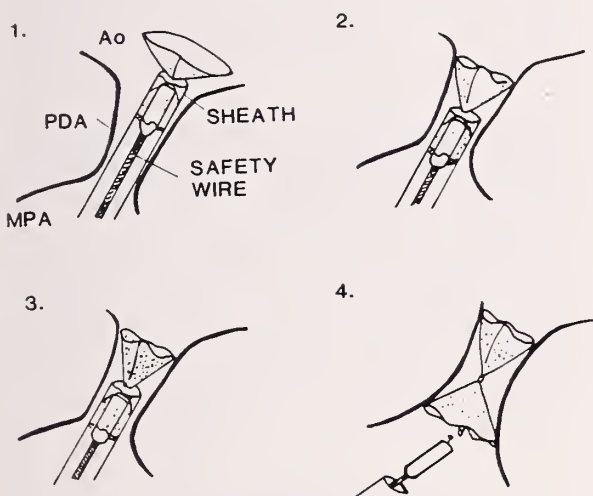
PATIENT	AGE (mo)	WEIGHT (kg)	PDA DIAMETER (mm)	Q_p/Q_s *
1	23	7.4	4	2.1
2	41	15.9	3	1.2
3	11	8.9	4	2.5
4	8	7.3	4	1.9
5	19	8.6	4	1.8
6	56	21.4	4	1.4
7	8	6.8	7	2.9
8	8	8.5	3	2.4
9	94	19.1	2.5	1.1

* pulmonary to systemic flow ratio

*Reprint requests: Larry A. Latson, M.D., Department of Pediatric Cardiology, University of Nebraska Medical Center, 42nd & Dewey Avenue, Omaha, NE 68105.

device was pushed out of the delivery pod by means of a long safety wire and through the transeptal sheath to the region of the ductus (Figure 1.). Under careful fluoroscopic guidance, the distal umbrella was extruded from the sheath and allowed to expand in the descending aorta. The sheath and occluder device were then retracted into the ductus arteriosus until the struts of the device could be seen to bend slightly. Further retraction of the sheath, while maintaining the occluder in the ductus, allowed expansion of the proximal umbrella in the pulmonary artery end of the PDA. When it was determined that the device was in good position, the safety wire was detached from the occlusion device and the sheath and delivery system were removed. A repeat aortogram was performed to confirm the position of the ductus occlusion device and to evaluate the presence of any persistent left to right shunt around the device.

FIGURE I



1. The long sheath has been positioned in the aortic end of the patent ductus arteriosus (PDA). The folded occlusion device has been advanced through the sheath and the distal umbrella has been allowed to expand in the descending aorta (Ao).

2. The sheath and occlusion device have been withdrawn into the PDA.

3. The sheath has been retracted as the occlusion device was held in place and the proximal umbrella has expanded in the pulmonary end of the PDA. The safety wire is still attached to the occlusion device.

4. The safety wire has been released and the occlusion device remains in the PDA.

Results:

In each of the nine patients, the PDA

occluder was successfully manipulated into the ductus arteriosus (Table II). In one patient (patient 7) the device could not be maintained in position once both umbrellas were opened. This occurred in the smallest patient who had the largest diameter ductus. The device was not released and was withdrawn back into the long sheath without difficulty.

TABLE II

PATIENT	DEVICE RELEASED	POSITION MAINTAINED	RESIDUAL SHUNT	HOSPITALIZATION (DAYS)
1	Yes	Yes	SMALL	2
2	Yes	Yes	NONE	2
3	Yes	Yes	NONE	4
4	Yes	No/Yes	NONE	3
5	Yes	Yes	NONE	1
6	Yes	Yes	NONE	1
7	No	-	--	-
8	Yes	Yes	NONE	1
9	Yes	Yes	NONE	1

In each of the other patients, the safety wire was released after the occlusion device was in position. In one patient (patient 4) the safety wire caught the mesh material of the proximal umbrella and pulled the device out of the ductus. The device embolized to the right pulmonary artery, but was successfully retrieved with a catheter snare and removed through the femoral vein. The patient returned to the Catheterization Laboratory the following day and underwent successful placement of another PDA occluding device.

Complete occlusion of the ductus arteriosus occurred in seven of the eight patients in whom the device was successfully placed. A very small residual leak around the occluder remained in the first patient of this series. The device in retrospect was not optimally positioned, but cardiac catheterization three months post procedure showed a dramatic decrease in the patient's pulmonary artery pressure and the patient was symptomatically much improved.

There were no complications from the procedure. All patients were awake and taking fluids within eight hours of the procedure. The longest hospital stay of four days (patient 3) was necessitated by a fever following the

procedure that was subsequently found to be caused by otitis media. Patient 4 was hospitalized for three days because two attempts at ductus closure were needed. All of the other patients were discharged the day following the procedure and the last four patients were admitted the same morning as the procedure, so their hospital stay was only 24 hours.

Discussion:

Our results indicate that transcatheter closure of patent ductus arteriosus is a safe and effective technique in selected patients with the current design of the Rashkind PDA Occluder Device. The device appears to be most useful in patients over 6 kilograms with a small to moderate sized ductus arteriosus. A larger occluding device of similar design is available for older patients with a large ductus arteriosus (11 French delivery system required), but we have not had occasion to use this device to date. A different type of device was first used by Porstmann in 1974.² This device has had limited acceptance, however, because the technique for implantation is complicated and requires both arterial and venous access.

There have been no serious complications during placement of the Rashkind PDA Occluder at any of the centers currently testing the device (personal communication). Embolization of the device at the time of implantation has occurred in several patients but without serious consequence. In some patients, the device was removed in the Catheterization Laboratory (as in one of our patients) or at the time of thoracotomy, which was needed to surgically close the persistent ductus. It has been found in animals and in at least one patient that the device spontaneously turns in the blood stream to cause minimal obstruction if it does embolize and is not removed.

There have been no late complications noted in over five years of follow-up at other centers (personal communication). In animals,

the device has become completely endothelialized within a short period of time and would not appear to result in a residual risk for endocarditis. To date, there have been no late cases of endocarditis. We currently recommend continued SBE prophylaxis for a period of one year following implantation of the device, but discontinue routine SBE prophylaxis if there is no evidence of a residual shunt after one year.

Although surgical treatment of ductus arteriosus is safe and effective, transcatheter closure seems preferable in appropriate patients. Using the catheter technique, there is no need of general anesthesia and the patient does not have a residual thoractomy scar. Hospitalization is required for only one to two days in most instances.

Summary:

Nine patients have undergone attempted transcatheter closure of patent ductus arteriosus using the Rashkind PDA Occluder during a one year period. Patients ranged in age from 8 to 94 months and in weight from 6.8 to 21.4 kilograms. The occluder device could not be placed in one patient. The procedure resulted in complete closure of the ductus arteriosus in seven of the eight remaining patients and dramatic improvement in the symptoms and pulmonary artery pressure of the one patient who had a tiny residual leak. Duration of hospitalization in the last four patients was only 24 hours. Catheter closure of patent ductus arteriosus with the Rashkind PDA Occluder is a safe and effective alternative to the traditional surgical treatment.

References

1. Hoffman Julien IE and Christianson Roberta: Congenital Heart Disease in a Cohort of 19,502 Births With Long-Term Follow-up. *The American Journal of Cardiology*; 42:641-647, October, 1978.
2. Porstmann W, Hieronymi K, Wierny D, and Warnke H: Nonsurgical Closure of Oversized Patent Ductus Arteriosus with Pulmonary Hypertension - Report of a Case. *Circulation*; 50:376-381, August, 1974.

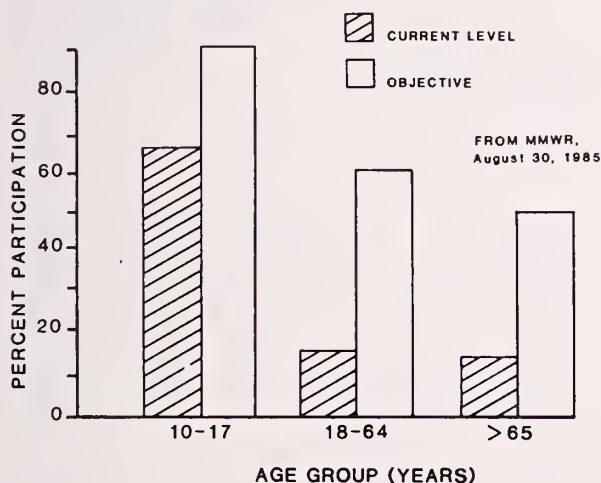
The Assessment of Physical Fitness

Presented at the 53rd Annual Scientific Assembly of Omaha-Midwest Clinical Society, October 28-30, 1985.

AN increasing public awareness in the importance of physical fitness is a welcome trend. Many clinics and laboratories specializing in physical fitness programs have been established. The goal of U.S. Public Health Service on physical fitness for the year 1990 is set at the active participation of more than fifty percent of general population of all ages in appropriate aerobic exercise program.¹ (Figure 1)

In this regard, it is now possible to quantitate the extent of aerobic capacity and physical fitness by studying minute-by-minute changes in cardiopulmonary functions. We report here our experience of physical fitness testing of healthy subjects, non-athletes as well as athletes, in a community hospital.

FIGURE 1. CURRENT PREVALENCE AND 1990 OBJECTIVE OF APPROPRIATE PHYSICAL ACTIVITY, BY AGE GROUP



Methods

The test subjects were referred for the assessment of physical fitness by local physicians. This report is based on the test results on 39 healthy males and 6 females, ages 17 to 65 (average age 39). Only 9 test subjects were smokers.

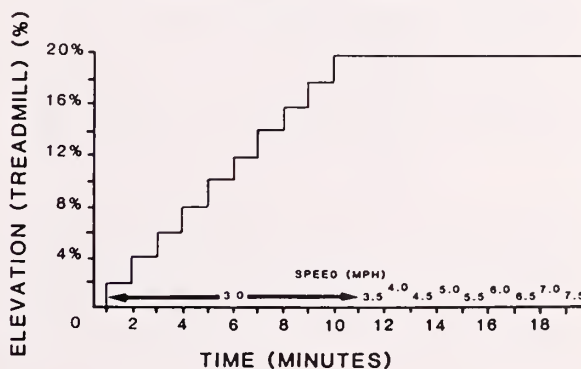
THOMAS P.K. LIM, M.D., Ph.D.,
MICHAEL DEHNING, M.D.
Immanuel Medical Center, Omaha, NE

The "athletes" are defined as those who do aerobic exercises regularly, according to the following criteria: (a) rhythmic contraction of large muscle groups, (b) intensity that required 60% or more of maximum O₂ consumption ($\dot{V}O_2$ max.), (c) frequency of three or more sessions per week, and (d) duration of 20 minutes or more per session.¹ Those who do not meet the above criteria are defined as "non-athletes" in this report.

The graded treadmill test is performed utilizing the modified Balke protocol. This protocol is designed by us to allow the test subjects an ample "warm-up" time prior to reaching the maximum O₂ consumption. (Figure 2)

The total ventilation ($\dot{V}E$), O₂ consumption ($\dot{V}O_2$), CO₂ production ($\dot{V}CO_2$), respiratory exchange ratio (R), respiratory rate (f), heart rate (HR), and oxygen pulse (i.e., $\dot{V}O_2/HR$) are measured at rest and during exercise continuously every minute by a metabolic cart (Aerobic measurement system, CPI model 7000). The O₂ saturation (SO₂) is also continuously monitored by the ear-oximetry

FIGURE 2. MODIFIED BALKE PROTOCOL



(Biox II). Standard 12-lead EKG is recorded throughout the test.

The blood pressure is measured manually before, during, and immediately after exercise. The test is terminated whenever the test subject reaches a level of extreme fatigue. In a few subjects, the test is stopped because of clinically significant cardiac arrhythmias, an excessive heart rate ($>200/\text{min}$) or severe blood pressure abnormalities.

The anaerobic threshold (A.T.) is defined as a point near maximum exercise where there are abrupt upward shifts of $\dot{V}\text{CO}_2$ and total ventilation ($\dot{V}\text{E}$) while the O_2 consumption ($\dot{V}\text{O}_2$) continues to increase linearly, relatively unchanged.² (Figure 3) These changes in the ventilatory and gas exchange pattern are due to a sudden outpouring of lactic acid from the exercising muscles according to Wasserman, et al.²

The physical fitness is classified into five categories: poor, fair, average, good, and

excellent according to American Heart Association.³ (Figure 4)

Results

The O_2 consumption ($\dot{V}\text{O}_2$) increased with increasing work-load and five subjects reached the maximum O_2 consumption ($\dot{V}\text{O}_{2, \text{max}}$) of more than 5,000 ml/min. (Figure 5) The highest $\dot{V}\text{O}_{2, \text{max}}$ in the entire group was 6,343 ml/min (40 year old, male). One of the highest $\dot{V}\text{O}_{2, \text{max}}$ in the world literature is 7,400 ml/min in a cross-country skier.⁴ The resting $\dot{V}\text{O}_2$ in healthy subjects is approximately 250 ml/min. Thus, during maximum exercise it reaches more than twenty times the resting level.

An analysis of aerobic exercise program and treadmill test of each subject confirms the fact that in general the athletes show a greater $\dot{V}\text{O}_{2, \text{max}}$ than the non-athletes. (Figure 6)

The total ventilation ($\dot{V}\text{E}$) increases linearly in relation to $\dot{V}\text{O}_2$. (Figure 7)

Obviously the heart rate (HR) increases with

FIGURE 3. ANAEROBIC THRESHOLD (AN EXAMPLE)

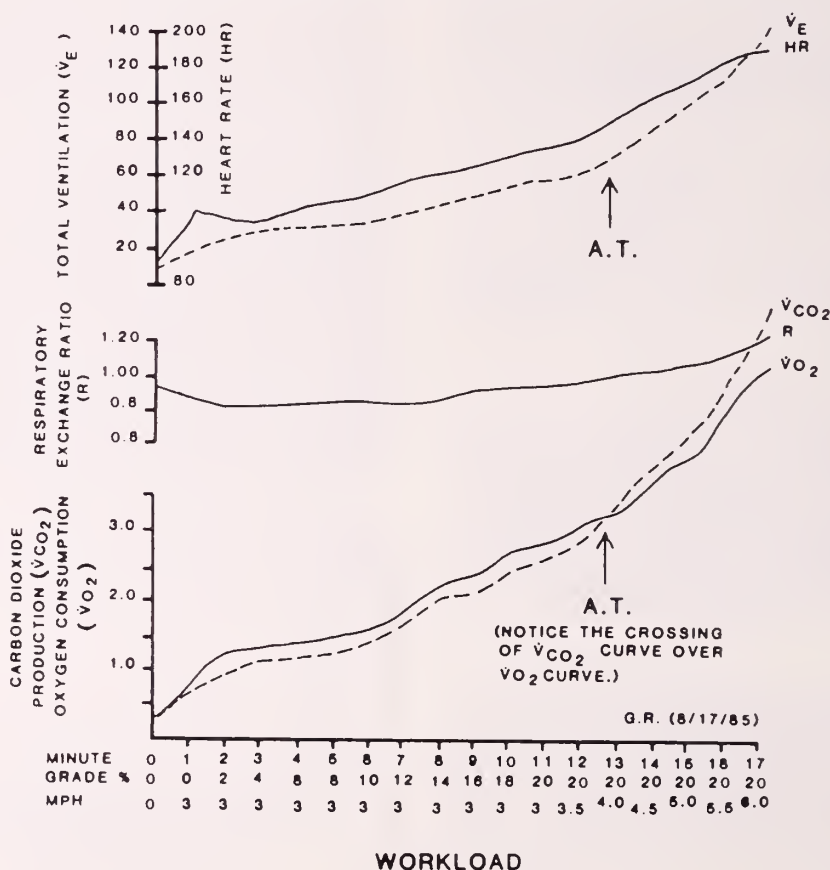


FIGURE 4. CLASSIFICATION OF PHYSICAL FITNESS

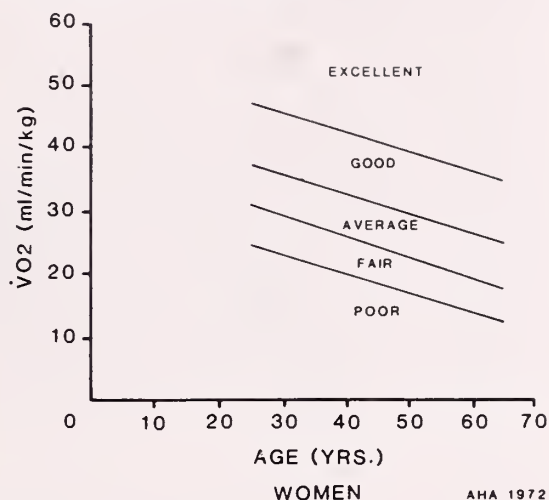
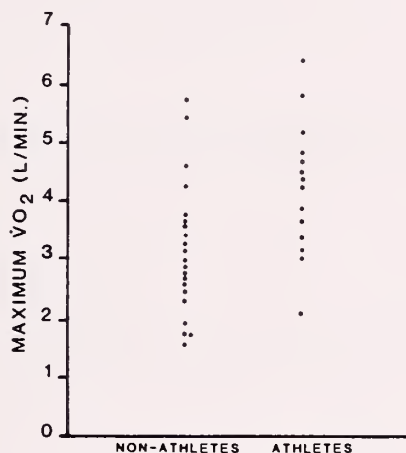
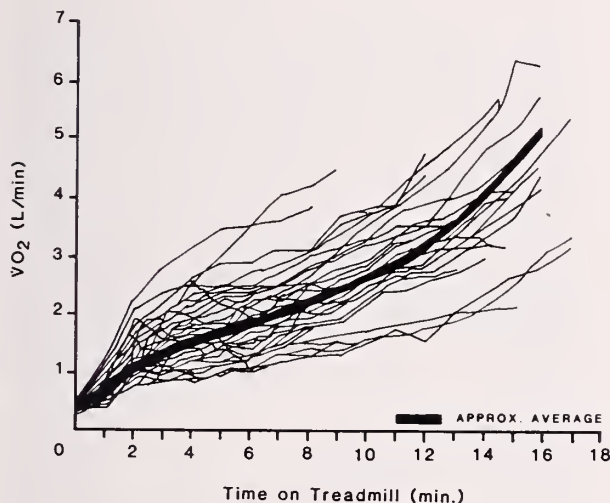


FIGURE 5. O₂ CONSUMPTION IN RELATION TO THE WORKLOAD

FIGURE 6. NON-ATHLETES vs. ATHLETES IN RELATION TO $\dot{V}O_2$, MAX.



exercise. However, the increase in $\dot{V}O_2$ is greater than that in the heart rate, thus the O₂ pulse [i.e., $\dot{V}O_2/HR$ (ml O₂/beat)] increases invariably with exercise. (Figure 8) The resting O₂ pulse in healthy subjects is 3–4 ml O₂/HR, while during maximum exercise it increases nearly five to six times of the resting level, i.e., 15–30 ml O₂/HR.

The O₂ saturation (SO₂) as measured by ear-oximetry shows a significant fall at the end of exercise. The resting SO₂ in our test subjects was approximately 96% and it was 87% at the maximum exercise level. (Figure 9) The lowest SO₂ in the entire group was 85%. A similar observation was reported by others in athletes during maximal exercise.⁵

The anaerobic threshold (A.T.) was reached in 36% of test subjects (15 males, 1 female) and corresponding $\dot{V}O_2$ level was from 1,650 to 5,000 ml/min.

According to the classification of physical fitness,³ our test subjects showed the following distribution:

0% (poor), 11% (fair), 18% (average), 40% (good), and 31% (excellent).

Discussion

The anaerobic threshold (A.T.) is defined as the level of work (Watts) or O₂ consumption at which metabolic acidosis and associated changes in gas exchange occur. In 1973, Wasserman et al² proposed to identify the AT by analyzing

FIGURE 7. $\dot{V}E$ vs. $\dot{V}O_2$ DURING EXERCISE

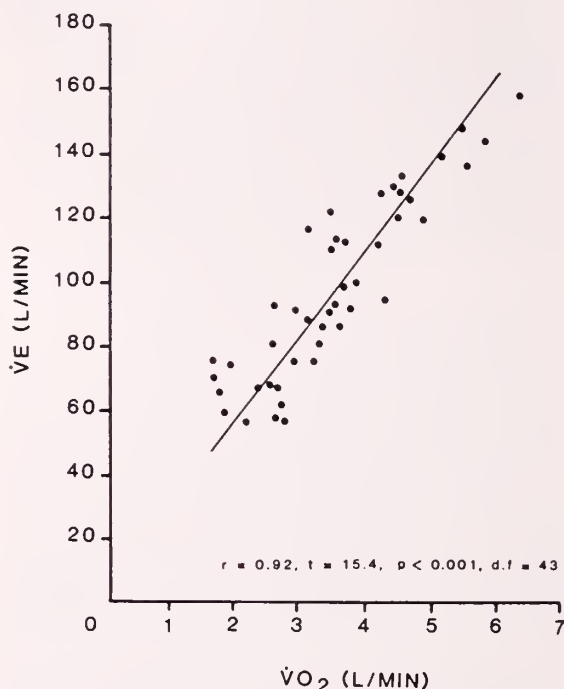


FIGURE 8. THE O_2 PULSE DURING EXERCISE

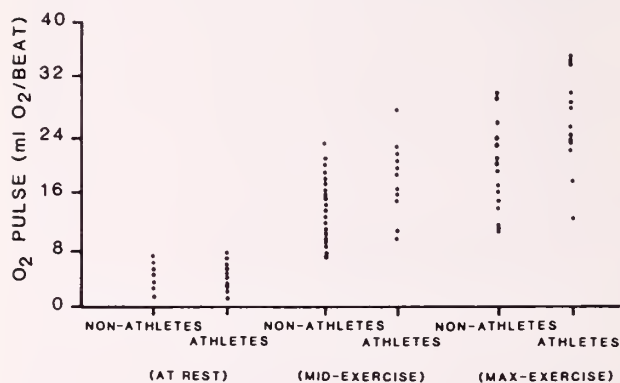
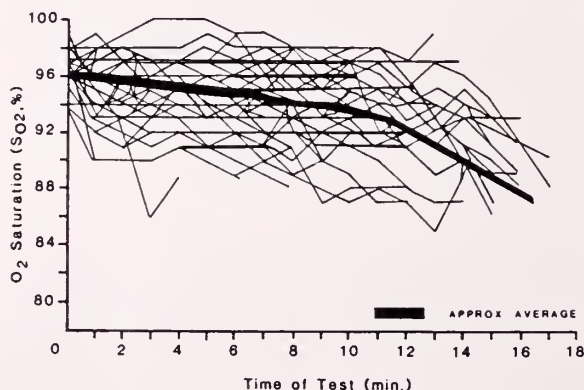


FIGURE 9. SO_2 IN RELATION TO WORKLOAD



the breath-by-breath ventilatory curves at the points of (1) non-linear, upward shift in $\dot{V}E$, (2) non-linear, upward increase in $\dot{V}CO_2$ while the increase in $\dot{V}O_2$ remains linear, (3) an increase in the end-tidal PO_2 without corresponding decrease in the end-tidal PCO_2 , and (4) non-linear, upward shift in R , as work rate was increased during an incremental exercise test. They determined the AT in 85 normal subjects of both sexes between 17 and 91 years of age using cycle ergometer. They found the lower limit of normal for AT was the same for all age groups of both sexes being 45 watts, equivalent to $\dot{V}O_2$ of approximately 1L/min. However, the AT was much higher in physically fit subjects, as high as 180 watts ($\dot{V}O_2$ of approximately 4L/min.)

Although the concept of AT is very attractive, several theoretical and technical aspects of importance should be mentioned. The first is the selection of incremental work rate of exercise. Wasserman, et al² state that the detection of AT is easier during the 1 minute incremental test (i.e., during unsteady state) than the 4 minutes incremental test (i.e., during steady state), while the increments of shorter duration (e.g., 30 sec.) in work rate tend to give a misleadingly high AT. The exact cause of this difference is uncertain but this is presumably due to the transit time delays of CO_2 stores and lactate between the tissue and the lungs.

The second aspect is the selection of respiratory parameters to detect the AT. Although it is theoretically proper to employ all four respiratory parameters, as described originally by Wasserman et al,² from a practical point of view it is adequate to use two or three parameters, such as $\dot{V}E$, $\dot{V}CO_2$, and/or R .

The third aspect is the variability of AT determination among evaluators. Yeh, et al⁶ asked four independent evaluators to determine the AT from the exercise records of eight healthy subjects. The authors found the standard deviation of variation for a given subject varying from 0.4 min. to 2.2 min.; thus they report an unacceptably large range of AT values for individual subjects when determined by different evaluations.

The fourth aspect is the relationship between the AT as determined on the basis of respiratory gas exchange (i.e., AT_{GE}) and that

as determined from the blood lactate change (i.e., AT_{LA}). Since the concept of AT_{GE} is based on the assumptions that the exercising muscles, when these reach an anaerobic stage, produce lactic acid, which in turn reacts with bicarbonate stores producing a large amount of volatile CO_2 and, that the lactic acidosis stimulates the respiratory center causing non-linear increase in $\dot{V}E$, it is reasonable to assume that the AT_{GE} corresponds closely to the AT_{LA} . In reality, however, there is a considerable controversy as to the validity of such assumption. On one hand, some studies^{8,9} report that there is indeed a close association between the AT_{GE} and the AT_{LA} . On the other hand, some investigators^{6,7} have presented data that seriously question such a close association between the two. In fact, Yeh, et al⁶ conclude that the AT_{LA} is not detectable at all.

Finally, it should be cautioned that the AT_{GE} will not be reached at all in severely handicapped patients with cardiopulmonary diseases. This is because the exercise has to be terminated early in the test on account of extreme shortness of breath, tachyarrhythmias, or chest pain, etc., before an adequate metabolic acidosis is induced. The AT_{GE} is non-invasive and is a useful tool in the assessment of physical fitness in healthy subjects but its application is markedly limited in patients with cardiopulmonary disability.

The majority of test subjects in our study showed a significant fall in the O_2 saturation (SO_2) as the intensity of exercise was increased, as shown in Figure 9. The resting SO_2 was 96% and it fell to 87% at the peak of exercise. A similar phenomenon was reported by Roswell, et al⁵ in varsity athletes who had a resting SO_2 of 97% and a SO_2 of 85% during the last 15 seconds of 3-minute run at 7 mph. Before going into discussion of mechanisms of this fall in SO_2 during exercise, it is relevant here to review briefly (a) the changes in respiratory gas tensions and contents, and (b) the alterations in pulmonary hemodynamics during exercise.

There is a general agreement that the arterial PO_2 falls slightly, i.e., 2-3 mmHg, while the alveolar PO_2 shows a considerable increase, i.e., 10-15 mmHg, during heavy exercise, thus increasing the (A-a) O_2 gradient. The arterial O_2 content and capacity, however, remain relatively unchanged throughout the exercise period, while the mixed venous O_2 content falls steadily as the intensity of exercise increases until it reaches a very low level of 4 ~ 5 vol %.¹² Therefore, the fall in arterial SO_2 at the peak exercise cannot be fully explained by the behaviors of arterial O_2 tension, content or capacity.

The alterations in pulmonary hemodynamics during exercise are considerable and are summarized in Table 1.¹² The mean pulmonary

TABLE 1
Pulmonary hemodynamics at rest and during heavy exercise

	Rest	Exercise
Pulmonary blood flow (l/min)	5	25
Pulmonary arterial pressure (mean) (mmHg)	15	25
Pulmonary vascular resistance (dyres-sec.-cm-5)	150	100
Left atrial pressure (mmHg)	5	8
Pulmonary capillary blood volume (ml)	70	200
Extravascular lung water (ml)	41	43
RBC transit time (mean) (Sec)	0.9	0.4

arterial pressure increases slightly while the corresponding increase in pulmonary blood flow is much greater with a resultant fall in pulmonary vascular resistance. The pulmonary capillary blood volume almost triples but the extravascular lung water content is unchanged. Although the RBC transit-time through the pulmonary capillary is markedly shortened to more than $\frac{1}{2}$ of the resting transit time, this is still adequate for the O₂ transfer from the alveolar space into the capillary blood. Thus, it is also apparent that the changes in pulmonary hemodynamics cannot fully account for the fall in SO₂ during peak exercise.

It is well to remember that during strenuous exercise body temperature increases markedly. For example, during marathon running the rectal temperature can increase to 42°C.¹³ It is also well known that lactic acidosis develops during exercise with a fall in arterial pH to a level of 7.2.¹⁴ Such a combination of metabolic acidosis (the "Bohr effect") and hyperthermia will shift the O₂ dissociation curve to the right causing SO₂ to fall even if the arterial PO₂ remains unchanged. Thus it is apparent that the rightward shift of the O₂ dissociation curve must be one of the major mechanisms of causing a fall in SO₂ at the peak exercise.

Another mechanism to be considered in this regard is the status of 2,3 diphosphoglycerate (DPG) in athletes as compared to that in non-athletes. The increase in 2,3 DPG in red cells will also shift the O₂ dissociation curve to the right, similar to that seen in metabolic acidosis and/or hyperthermia. Then the question is: what is the 2,3 DPG level in trained subjects as compared to untrained subjects? A review of published data shows a conflicting result: in one study no difference in 2,3 DPG was observed between world-class athletes and healthy sedentary controls.¹⁵ In contrast, significantly higher resting levels of 2,3 DPG were observed in athletes than in non-athletes.¹⁶ Therefore, the role of 2,3 DPG in relation to O₂ desaturation during exercise remains unresolved at the present time.

As compared to the red-cell 2,3 DPG, the role of myoglobin is probably minor in view of the very slight "Bohr effect" it has in relation to pH change. The effect of temperature on O₂ dissociation curve of myoglobin is not well established. However, myoglobin certainly

serves as one of major sources of body O₂ store.¹⁷

In the past it was generally accepted that in young men free of cardiopulmonary pathology, pulmonary function does not limit the O₂ uptake and maximum physical performance.^{10, 11} This view was recently challenged by Hammond et al.¹⁴ Using the inert gas method, they showed there is a significant ventilation perfusion inequality and also O₂ diffusion limitation during heavy exercise in healthy adults. They felt that these changes were sufficient enough to explain the widening of the (A-a) O₂ gradient. In this study, the arterial PO₂ at rest was 99 mmHg and fell to 90 mmHg during heavy exercise ($\dot{V}O_{2,max}$ >3.5L/min).

Summary

(1) Physical fitness and aerobic capacity are studied in forty-five healthy subjects during an incremental treadmill exercise.

(2) Thirty two test subjects show a good to excellent physical fitness and five subjects have over 5,000 ml/min of maximum oxygen consumption.

(3) The anaerobic threshold is reached in sixteen subjects.

(4) The O₂ saturation by ear oximetry shows a significant fall at the end of exercise from 96% (pre-exercise control) to 87% (at the maximum exercise level) in the majority of test subjects.

(5) The possible mechanisms for the O₂ desaturation at the peak exercise is discussed.

References

1. Status of the 1990 physical fitness and exercise objectives. Morbidity and Mortality Weekly Report. 34:521, 1985.
2. Wasserman K, Whipp BJ, Koyal SN, and Beaver WL. Anaerobic threshold and respiratory gas exchange during exercise. *J Appl physiol* 35:236-243, 1973.
3. Exercise testing and training of apparently healthy individuals. A handbook for physicians. The committee of exercise. American Heart Association. 1972.
4. Astrand, P-O, and Rodahl K. Textbook of work physiology - 2nd edition. McGraw-Hill, 1977.
5. Rowell LB, Taylor HL, Wanz Y, and Carlson WS. Saturation of arterial blood with oxygen during maximal exercise. *J Appl physiol* 19:284-286, 1964.
6. Yeh MP, Gardner RM, Adams TD, Yanowitz FG, and Crapo RC. "Anaerobic threshold" Problems of determination and validation. *J Appl physiol* 55:1178-1186, 1983.

7. Gladden LB, Yates JW, Stremel RW and Stamford BA. Gas exchange and lactate anaerobic threshold: inter- and intraevaluator agreement. *J Appl physiol* 58:2082-2089, 1985.
8. Caiozzo VJ, David JA, Ellis JF, Azus JL, Vandergriff R, Prietta CA and McMaster WC. A comparison of gas exchange indices used to detect the anaerobic threshold. *J Appl physiol* 53:1184-1189, 1982.
9. Ivy JL, Withers RT, Van Handel PJ, Elger DH, and Castill DL. Muscle respiratory capacity and fiber type as determinants of the lactate threshold. *J Appl physiol* 48:523-527, 1980.
10. Asmussen E and Neilsen M. Alveolo-arterial gas exchange at rest during work at different O₂ tensions. *Acta Physiol Scand* 50:153, 1960.
11. Riley RL. In: Science and Medicine of exercise and sports. Edited by WR Johnson, N.Y. Harper, p 162, 1960.
12. Dempsey JA, Vidruk EH and Mastenbrook SM. Pulmonary control systems in exercise. *Fed proc* 39:1498-1505, 1980.
13. Naron MB, Wagner JA, and Horvath SM. Thermo-regulatory responses during competitive marathon running. *J Appl physiol* 42:909-914, 1977.
14. Hammond MD, Gale GE, Kapitan KS, Ries A, and Wagner PD. Pulmonary gas exchange in humans during exercise at sea level. *J Appl physiol* 60:1590-1598, 1986.
15. Rand PW, Norton JM, Barker N, and Lovell M. Influence of athletic training on hemoglobin-oxygen affinity. *Am J physiol* 224-1334-1337, 1983.
16. Taunton JE, Taunton CA, and Banister EW. Alterations in 2-3 DPG and P₅₀ with maximal and sub-maximal exercise. *Med Sci sports* 6:138-141, 1974.
17. Millikan GA. Muscle hemoglobin. *Physiol Rev* 19-503, 1939.

ERRATUM

In the article by Richard B. Davis entitled "Observations on Hematology in China" in the December 1986 issue of the Nebraska Medical Journal, line 5 should be April 1986, not 1976.

Maternal Mortality Review

1983-1984-1985

PERIODIC reports from your Maternal Child Health Committee have summarized maternal deaths occurring in Nebraska. The last such report was a twenty year review of reported maternal deaths from 1963 through 1982.¹ In this report we will update the reported maternal deaths over the past three years, 1983, 1984 and 1985.

In 1983 there were 26,599 births recorded in Nebraska with seven death certificates indicating association with pregnancy, but none were direct or indirect obstetric deaths. Four deaths resulted from automobile accidents. Of the remaining three deaths, there was one homicide, a basilar meningitis and a pulmonary embolus associated with renal malignancy.

In 1984 there were 500 fewer births, totaling 26,099; however, there were nine death certificates with indicated pregnancy. Three of these were non-obstetric, with two automobile accidents and one suicide. Of the remaining six cases, five were direct obstetric deaths and one was an indirect obstetric death. These are briefly summarized.

84-1 A 28 year old delivered at term with retained placenta increta and severe postpartum hemorrhage. Eventually, an abdominal hysterectomy was done. Death occurred some five days after delivery with renal failure and active tubular necrosis plus pituitary necrosis.

Direct Obstetric Death

84-2 A 28 year old Para II, Gravida III, died approximately two weeks after delivery of a stillborn infant at term with a diagnosis of lymphocytic myocarditis which failed to respond to extensive cardiac supportive measures with a resultant downhill course and death.

Indirect Obstetric Death

84-3 A 28 year old, Para I, Gravida III, Ab I, died some 15 minutes after delivery by repeat Cesarean Section under spinal anesthesia. Patient developed a sudden

WILLIAM L. RUMBOLZ, M.D.

Clinical Professor, Obstetrics and Gynecology,
University of Nebraska College of Medicine

drop in blood pressure and cardiac arrest on removing the placenta and closing the uterus. Cardiac resuscitation and support was instituted but only temporary response occurred and resuscitation was stopped after about three hours. Autopsy diagnosis of amniotic fluid embolism.

Direct Obstetric Death

84-4 A 26 year old, Para O, Gravida I was admitted with a decreased platelet count, bruising and apparent ITP. No pregnancy complications were reported. There was no elevation of blood pressure but a significant elevation of liver enzymes and a diagnosis of toxemia or gestosis of pregnancy with destruction of platelets was made. She was delivered by Cesarean section some 36 hours after admission but failed to obtain a satisfactory platelet response. She was diagnosed as overwhelming thrombotic thrombocytopenic purpura and died one week after delivery.

Direct Obstetric Death

84-5 A 28 year old, Para II, Gravida V, Ab II, was admitted in labor at term with good progress over some two hours. An unsuccessful attempt to give an epidural was followed by spontaneous rupture of membranes and a sudden profound cardiovascular collapse and shock. Immediate delivery was instituted with a resultant live infant. Resuscitative measures were to no avail. Autopsy diagnosed amniotic fluid embolism.

Direct Obstetric Death

84-6 A 30 year old, Para O, Gravida V, was admitted at 33 weeks with intrauterine fetal death. Patient had a history of two prior abortions and two prior mid-trimester

intrauterine deaths. Gestational diabetes was diagnosed in this pregnancy. Blood pressure was normal with the only abnormality being elevated liver enzymes. The patient developed severe epigastric pain with elevation of blood pressure to 220/130 and MgSO₄ and MS were given. About three hours later the patient became shocky and unresponsive. Lab showed a precipitous drop in hemoglobin. A diagnosis of hemoperitoneum with possible rupture of liver was made. Exploratory laparotomy with Cesarean Section delivery was done. Attempts to control bleeding from the ruptured liver were unsuccessful and death occurred.

Direct Obstetric Death

For 1985 there were four reported deaths in pregnancy for 25,540 recorded births. Two of the deaths were non-obstetric deaths. One was an autopsy diagnosis of bronchpneumonia at 12 weeks gestation in a patient under treatment for drug addiction. The second was a spontaneous pulmonary embolus in the sixth month of pregnancy with no prior symptomatology. The remaining two deaths were direct obstetric deaths, these are summarized below.

85-1 A 31 year old, Para III, Gravida V, Ab I, had three prior cesarean deliveries. The patient was obese with a delivery weight of 268 pounds. Her pregnancy was reportedly uneventful except for abdominal pain and pressure the month prior to her delivery. The patient was admitted at 36½ weeks pregnancy with vaginal bleeding and severe abdominal pain. An emergency cesarean section resulted in the delivery of a viable infant. There was partial dehiscence of the prior uterine incision with partial placental separation. Uterine atony and massive bleeding was treated by total hysterectomy. The patient continued to bleed and her condition deteriorated. In spite of multiple transfusions and two additional operative procedures, the bleeding could not be controlled. She died some ten days post delivery. The final diagnoses were listed as abruptio placenta with dehiscence of the uterus, acute renal failure, congestive heart failure, adult respiratory distress syndrome, pulmonary edema, bilateral pneumonia, neurologic encephalopathy and brain death.

Direct Obstetric Death

85-2 A 24 year old Para 0, Gravida I, was delivered by emergency cesarean section for fetal distress following artificial rupture of membranes. Thick meconium was present and the baby was reported to have Apgar scores of one at one minute, and nine at five minutes. The mother received Mefoxyn, 2 grams, at delivery and two additional doses over the subsequent twelve hours.

The patient had persistent post operative temperature elevation and diarrhea over the first four post operative days in spite of oral Keflex gms 2 daily. She became increasingly toxic, more distended and progressively disoriented. On her seventh post operative day, the patient was transferred and exploratory surgery with pelvic clean out was performed. The patient never regained consciousness and died on her 8th post operative day. Autopsy showed myometritis and salpingitis, extensive peritonitis, pleural effusion and pseudomembranous colitis. Cultures showed Bacteroids, E. Coli, Strep. viridans, and Strep. faecalis.

Direct Obstetric Death

In looking over the obstetric deaths the past two years, we are reminded that hemorrhage, toxemia and infection are still leading causes of maternal deaths. Cesarean delivery was associated with five of the seven direct obstetric deaths listed. It is difficult to fairly assess preventability from the information available. Considering all preventable factors, we would have to assume virtually all of the reported deaths have some such factor present that might have affected the eventual outcome.

For the past two years, 1984 and 1985, Nebraska has participated in the voluntary maternal mortality surveillance of the ACOG. Abstracts are forwarded to the study committee of the American College of Obstetric and Gynecology. Anonymous reports have been made at the last two annual meetings of the ACOG. These reports point up the need for a continued maternal mortality review committee.

Reference

1. Rumbolz WL: Twenty Year Review Maternal Mortality - Nebraska, Nebraska Medical Journal, January, 1983.

Urinary Tract Calculi in Pregnancy

URINARY tract calculi in pregnancy are relatively uncommon, reported as occurring in one in 216 to 3,800 pregnancies, but are the most frequent painful nonobstetric cause of hospitalization during pregnancy.¹ As the following cases illustrate the diagnosis is not always an easy one to make.

Case 1

A 32 year old woman in the 38th week of her second pregnancy complained of urinary frequency, lower abdominal discomfort, back pain and right flank pain. She had no rupture of membranes, diarrhea or fever or chills. The pregnancy had been uneventful, and the patient's past history was unremarkable. On examination the temperature was 37.5 degrees C (99.4 degrees F), pulse 80 per minute, respirations 20 per minute, heart tones 144 per minute. There was tenderness on percussion of the right costo-vertebral angle. Analysis of a catheterized urine specimen showed 200 to 300 red blood cells and eight to 10 white blood cells per high powered field. Ultrasonography revealed hydronephrosis of both collecting systems, more marked on the right. A limited intravenous pyelogram (IVP) demonstrated a urinary tract calculus in the right ureter.

After intravenous hydration, analgesics and antibiotics, the patient's symptoms improved. On discharge from the hospital, she was placed on oral analgesics and antibiotics. No stone was collected. The patient later delivered a viable 3.5 kg (7 lb. 12 oz.) male infant with no apparent anomalies. A repeat IVP postpartum showed no calculus or obstruction.

Case 2

A 21 year old female presented in the 28th week of her first pregnancy with complaints of fever, chills, left upper back pain and intermittent uterine contractions. Urinalysis demonstrated large amounts of red blood cells per high powered field. A limited IVP showed delayed function on the left and a calculus in the path of the left ureter near the left ureterovesical junction. The patient was treated with

PAUL M. PAULMAN, M.D.

Assistant Professor

Department of Family Practice

University of Nebraska Medical Center

42nd & Dewey

Omaha, NE 68105

IV hydration, antibiotics, and tocolytic agents. The patient improved dramatically; the pain subsided and the uterine contractions ceased. No stone was collected. Serum calcium and uric acid were normal. After a somewhat stormy antepartum course complicated by frequent urinary tract infections and premature labor, the patient delivered a 6 lb. 7 oz. viable male infant by primary cesarean section at 37 weeks gestation for primip breech and fetal distress.

During the postpartum course the patient again became symptomatic with fever, chills and left upper back pain. Urologic evaluation revealed a high grade left uretero-pelvic obstruction. Retrograde pyelography revealed the previously seen calculus to be outside of the path of the left ureter. The patient was treated with a left ureteral stent and left percutaneous nephrostomy. The patient later underwent surgical correction of her left ureteral obstruction. The cause of this obstruction was thought to be congenital.

Discussion

The cause of urinary tract calculi in pregnancy is usually idiopathic. Hyperparathyroidism and urinary tract infections are rarely contributing factors. No correlation between the physiologic hydronephrosis of pregnancy and calculus formation has been demonstrated. In one series of 14 patients, twice as many calculi were noted on the left side as were seen on the right. Although stone analysis rarely has been performed, the composition of the stone has not been a significant aid in determining

the cause of calculus formation. There is no predominant incidence in any one trimester of pregnancy, although increased parity does seem to be a risk factor.

Urinary tract calculi in pregnancy should be suspected when symptoms of ureteral colic and hematuria are present. As illustrated in Case 2 the diagnosis is not always an easy one. The diagnostic study of choice for urinary tract calculi in pregnancy is the limited IVP consisting of a scout abdominal film, a film 20 minutes after dye injection, and a one hour delayed film if necessary. The maternal gonads and the fetus are exposed to less radiation with the limited procedure than with the standard IVP, which utilizes four to six films. When a calculus or an obstruction is demonstrated high in the collecting system, the lower maternal abdomen can be shielded before subsequent films are obtained.

Most studies of patients with urinary tract calculi have shown no serious complications in the neonate or the mother as a result of the calculus.

Management of urinary tract calculi in pregnancy is usually conservative, depending on the location of the stone, degree of obstruction, presence or absence of infection,

general condition of the patient and stage of pregnancy. Conservative therapy consists of pain relief, fluids, and appropriate antibiotics if infection is present. Most calculi are passed spontaneously.

Surgical therapy is reserved for the patient with refractory infections or a high degree of obstruction. The procedures of choice are cystoscopic retrieval of the calculus or passage of a ureteral drainage catheter. Open ureterolithotomy is rarely necessary. Termination of pregnancy, once advocated as therapy for calculi, is rarely if ever indicated.²

Surgical therapy is not contraindicated at any stage of pregnancy; however, there is an increased risk of premature labor following an operation. The risk increases as the pregnancy progresses, reaching a peak of approximately 12 percent in the third trimester. Therefore, fetal monitoring and obstetric backup are recommended for any pregnant patient undergoing an operation for removal of a calculus.

References

1. Janes WA, Carrea RJ, Ansel JS: **Urolithiasis Associated with Pregnancy.** *J Urol*, 1979; 122:333-S.
2. Strong DW, Murdison RJ, Lynch DF: **The Management of Ureteral Calculi During Pregnancy.** *Surg Gynecol Obstet*, 1978; 146:604-8.

HISTORY OF MEDICINE

University of Nebraska Medical Center Department of Pathology and Microbiology

THE EARLY YEARS

WHEN the classes opened at the Omaha Medical College in 1882-83, Dr. A. S. von Mansfelde, an 1872 graduate of Rush Medical College, was named as Professor of Pathology. He had been practicing in Chicago for a number of years, and his initial contact with Nebraska had been a visit as a consultant in a case involving a disease of bone. He was sufficiently impressed with Nebraska that he decided to move to Lincoln to establish a medical practice. In a relatively short time, he transferred his practice to Ashland, Nebraska, where he developed a hospital. He took part in discussions about establishing a new medical school, the Omaha Medical College, and was included in the original faculty roster. During the years that he was active in teaching, he commuted regularly by train to Omaha for classes.

The entire academic course at the Omaha Medical College was two years length with instruction lasting twenty weeks each year. Pathology had one lecture per week during this period. With the academic year of 1885-86, the Omaha Medical College became the Medical Department of the Methodist Episcopal College of Nebraska, headquartered at York, Nebraska. Dr. W.F. Milroy became Professor of Histology and Pathology at this time. Pathology instruction lasted six months with two hours of lecture per week. Dr. Milroy had graduated two years earlier from Columbia Medical School in New York City. The eponym, "Milroy's disease," is identified with him. This pattern of instruction continued through the year of 1889-1890. In 1890, six hours of Bacteriology were added to the Pathology curriculum, and taught by Dr. Harold Gifford.

With the academic year of 1890-91, the

J.R. NEWLAND, M.D.*

Associate Professor, University of Nebraska College of Medicine

C.A. McWhorter, M.D.

Professor Emeritus, University of Nebraska College of Medicine

J.P. Tollman, M.D.

Professor Emeritus, University of Nebraska College of Medicine

Omaha Medical College became the Medical Department of the University of Omaha at Bellevue. Dr. H.L. Hewetson was designated Demonstrator in Pathology. The students made their own microscopic slides, which they could keep for their own education and review at a later time. Graduates were urged to visit the department after graduation, where they could use microscopes for further study. With the session of 1891-92, a new three-year curriculum was initiated. Dr. Hewetson had become Professor of Pathology and Dr. W.R. Lavender was added to the department as Demonstrator. Meanwhile, Dr. Milroy had become a Professor of Clinical Medicine.

Pathology gave one lecture per week during the third year of the new curriculum, including histology and bacteriology. Again there were six bacteriology lectures. There was a Microscopy Laboratory during the second year. In the general usage of the time, this would have included examination of urine sediment and stained bacteriologic smears. During the year 1892-93, Dr. Lavender became Professor of Pathology.

During the academic year of 1893-94,

*Reprint requests: J.R. Newland, M.D., Department of Pathology and Microbiology, University of Nebraska Medical Center, Omaha, Nebraska 68105.

instruction in Pathology had expanded appreciably. There was one hour of lecture and two laboratory periods per week during the second year and one hour of lecture each week during the third year. During the sessions of 1894-95 and 1895-96, the program was similar. Dr. Lavendar carried out this instruction and Dr. Hewetson was no longer on the faculty. During the years of 1896-98, a four year curriculum began. Pathology instruction was given by Dr. Lavender and consisted of one lecture and two laboratory periods per week in the second year with one lecture and two laboratories per week during the third year.

The four-year medical course was expanded to seven months each year in 1898-99. There were four hours of Pathology instruction per week through two years of the program. For the academic year of 1899-1900, Dr. W.K. Yeakel was a Professor of Pathology. The Pathology course consisted of one lecture and two hours of Laboratory per week during the second year and one lecture per week during the third year. In the following year, the course was expanded to two lectures per week and four hours of laboratory per week during the second year with two hours of lecture and laboratory per week during the third year.

PART OF UNIVERSITY OF NEBRASKA

In 1902, the Omaha Medical College became a part of the University of Nebraska, being renamed The University of Nebraska College of Medicine. The first two years of the medical instruction were carried out on the Lincoln campus. In the second year, there were two hours of Pathology and lecture and one laboratory per week, and in the third year there were two hours of instruction per week. The next five years are unclear as to what instruction was given in Pathology in Omaha. There was one hour per week in the third year, but instructors' names and a course description are not known.

Instruction on the Lincoln campus was under the direction of Dr. Herbert Harold Waite. Pathology was allotted four hours per week during the second year. Bacteriology was added to the instruction in Pathology, and the total hours allocated reached nine hours per week during the session of 1905-06. By 1906-07, a Clinical Diagnosis course of one hour per week had been added to the instruction.

By 1908-09, a course called Special Pathology in the third year occupied two hours per week; however, instructors and course content are not known. This instruction was continued through the session of 1912-13. During this academic year, the decision was made that all of the medical instruction would be transferred to Omaha, and a reorganization of the faculty occurred.

With the construction of the new building for the College of Medicine on the far western edge of the city of Omaha, a number of the faculty who had been teaching in Lincoln transferred to Omaha, and new faculty members were added to the roster. One of these was Dr. Oscar T. Schulz, who became Professor of Pathology, bringing with him Dr. A.A. Johnson from Western Reserve University. Dr. Schulz continued in this position until 1917.

Dr. Harold E. Eggers was named Professor of Pathology in 1917, remaining in that position for 31 years until his retirement in 1948. Bacteriology was a part of the Pathology instruction, being taught by Dr. John T. Myers for many years, and subsequently by Dr. M.F. Gunderson. Starting in 1913, with all of the teaching now in Omaha, the sophomore pathology course was allocated 306 hours. This was approximately one-third of the contact hours during the sophomore year of medical school. Bacteriology was given 162 of the hours. In the third year, Clinical Pathology was taught for a total of 108 hours. In 1917, a fourth year course in Public Health was added and taught by the new Department of Pathology and Bacteriology.

FIRST FULL TIME STAFF

The first full-time clinical pathologist was Dr. Aura J. Miller, who was with the department from 1926-1930, after which he became Professor of Pathology at the University of Louisville. Dr. E.T. Manning was part-time with the department for several years during this period, participating in the teaching of Anatomic and of Clinical Pathology. Course hours were adjusted every few years, with an allocation to the Department of Pathology and Bacteriology reaching a total of 695 student contact hours in 1930-31; 211 of this was in bacteriology and related areas.

Joining the department in 1925, Miss Helen Wyant was the first trained Medical Tech-

nologist on the faculty and in the state. She began a Medical Technologist training program, usually with one or two students at a time. This program became gradually more formalized, and more students were added. Miss Wyant continued with the department until 1940 when she left the department. In the Academic Year of 1937-38, the program for Medical Technology training was recognized as a formal course listed in the catalog. In the Academic Year 1947-48, the program first offered the Bachelor of Science in Medical Technology. Dr. Morten Kulesh was Medical Director of the Division of Medical Technology until 1964, when A.L. Larsen, M.D. became Medical Director.

Dr. James Perry Tollman joined the department in the Academic Year 1931-32, as Assistant Professor of Clinical Pathology. Dr. Tollman had received his M.D. at the University of Nebraska College of Medicine and took a pathology residency at Peter Bent Brigham Hospital in Boston. In the year of 1939-40, a pathology residency program was formally initiated in the Department which has continued to the present time. During the decade of the 1940's, Public Health instruction by the department was emphasized in the courses, and departmental responsibility reached an all-time peak of 785 teaching hours per academic year. In the period from 1941-1948, the Department of Pathology and Bacteriology taught the course in General Pathology during the sophomore year. This course was under the supervision of Harold E. Eggers, M.D., Chairman of the Department of Pathology and Bacteriology. During this time there was a course in Clinical Pathology which was taught during the sophomore and junior years, under the supervision of J.P. Tollman, M.D. The Sophomore course in Bacteriology was under the supervision of Millard F. Gunderson, Ph.D.

The service functions of the Department of Pathology and Bacteriology were carried out under the direction of Dr. Tollman. Surgical pathology and autopsy pathology were done in space in the present "third" level of the north wing of Unit I of the University Hospital. This space consisted of a Morgue with bleachers, storage space and a small anteroom where frozen sections were performed. Surgical pathology gross descriptions were done in the

same area. There were two adjacent offices and a resident work area. Frozen sections were carried out using dry ice. There was no dictating equipment for either autopsies or surgical pathology during much of this period. A wire recorder was finally purchased by Dr. Tollman. This caused many hours of untangling of wire and was not too satisfactory for the most part, but better than nothing.

The teaching space facilities in North Laboratory (presently named Poynter Hall) were on the first and second floor of the building with storage space in the basement adjacent to the anatomic storage and preparation rooms. A large laboratory on the north side of the second floor of this building seated 96 students at desks with microscopes. This was a recently rebuilt room and was well lit and well constructed. A lecture room was adjacent to this at the west end of the building on the second floor. Clinical Pathology was taught on the east side of the building and there were lockers for laboratory equipment for the course in Clinical Pathology. Offices for administrative and research activities were adjacent to these areas on the second floor. On the first floor were the laboratories of microbiology and later of the histology preparation area for autopsies, surgical pathology and teaching cases. Down the main hallway on the second floor were a large number of cabinets with glass fronts where a large number of museum gross pathology specimens and wax models known as moulages were stored for use during the teaching activities.

J. P. TOLLMAN, M.D., NEW CHAIRMAN, 1948

Additional teaching supervision, particularly during the laboratory sessions in General Pathology and Clinical Pathology, were by Charles Baker, M.D., Chief Pathologist for Nebraska Methodist Hospital and Pliny Allen, M.D., Chief Pathologist at the Immanuel Lutheran Hospital, both in Omaha. The full time staff at this time were Harold E. Eggers, M.D. and J. Perry Tollman, M.D. In 1947-1948, Frank M. Townsend, M.D. was on the faculty at the College of Medicine as a teacher and supervisor of autopsy and surgical pathology. He subsequently moved on to other academic positions in Pathology. Horace K. Giffen, M.D. joined the teaching staff during this period, bringing expertise from previous

experience as a medical missionary in Egypt. He remained for about three years. In 1949, when Dr. Harold E. Eggers retired, Dr. J. Perry Tollman became Chairman of the Department of Pathology and Bacteriology. Dr. Tollman remained Chairman of the Department until 1954 when he became Dean of the College of Medicine and remained in that position until 1964. By 1952, the residency program had grown from one resident to five or six. Some residents from other specialties in the field of medicine spent three months to one year in pathology as part of a residency program. The remainder were full time residents with a career devoted to pathology.

During this period, there were no morgue attendants or assistants in surgical pathology. There was one secretary in the service portion of the Department to type the reports. There was no air conditioning in any portion of the facilities of the department. All of the cleanup work and much of the janitorial work was done by the staff and residents.

One of the long remembered incidents that occurred at this time was "The Episode of the Dropped and Broken Bottle of Concentrated Formaldehyde." This happened in the morgue where the formalin was received in large glass containers, one of which a resident dropped accidentally, spilling formalin over the morgue area. The fumes were so intense that no one could mop up the formalin for more than a few minutes at a time. Another incident deserves mention: A project being carried out involved the clearing and dissecting of axillary tissue for enumeration of lymph nodes in carcinoma of the breast. This resulted in "The Episode of the Unexpected Oil of Wintergreen" and subsequent grave anguish to one of the residents. One of the resident staff sometimes used the sink in the morgue for another purpose. Unaware of the project, this individual experienced pangs of discomfort as a result of the fumes of the oil of wintergreen. The incident has been recalled many times and related from resident to resident.

The clinical laboratory facilities during the 1940's were housed on the fourth floor of the second unit south of the University Hospital. The chief medical technologist at this time was Ruth Pohle, MT (ASCP) who continued at the University until her retirement. The facilities consisted of a room for chemistry, a small room

for hematology and a miscellaneous laboratory. At the far end of this wing was a large student laboratory where medical students were required to do their own blood counts and urine analyses. In the chemistry area of the clinical laboratory, much time was spent in making protein-free filtrates for the analysis of such items as non-protein nitrogen (NPN), glucose, and uric acid. There was one spectrophotometer in the laboratory. During the early 1940's, histology slide preparation was also done for microscopic review of tissues from both autopsy and surgical pathology. There was no well-trained histology technician, and the slides in general were of rather poor quality. Bone marrow examinations were done by Dr. Tollman. The department made its own preparations of thromboplastin for the prothrombin time by dissecting and then processing rabbit brains. The controls were quite variable. C. A. McWhorter, M.D., who had been a resident in the department for one year in 1945-46, entered the army, and returned in 1948 to complete his residency in 1949 becoming an instructor in the department. By 1950, the morgue and offices comprised 1200 square feet, the north laboratory 3000 square feet, and the clinical laboratory 1000 square feet.

In 1952, the department was able to acquire an autopsy assistant, Mr. Alfred Bradford, who was a laborer with no previous experience in the morgue. Mr. Bradford was trained by Dr. McWhorter and became a beloved fixture in the department until his death in 1970. It was in 1954 that Bacteriology was separated from the department to become the Department of Medical Microbiology. The microbiology portion of the clinical laboratories now came under the jurisdiction of the new department headed by Millard F. Gunderson, Ph.D. It was also in 1954 that John Rudolf Schenken, M.D., head of pathology at Nebraska Methodist Hospital was named chairman of the renamed Department of Pathology. Dr. Schenken was a nationally-renowned pathologist. Dr. McWhorter became Vice-Chairman of the department.

SCHENKEN GOALS

In a 1956 report to the Dean of the College of Medicine and Chancellor of the University, Dr. Schenken outlined the goals of the Department of Pathology: a) improve the



Dr. John Rudolf Schenken
Chairman, 1954-1965

student slide collections, b) establishment of an indexed and organized kodachrome collection of gross pathology specimens, c) integration of the courses in General Pathology and Medical Microbiology, d) teach the Clinical Pathology course during the second half of the sophomore year rather than in the first half of the junior year, e) initiate regularly supervised clinical pathology exercises by junior students on patients assigned to them, f) establishment of an annual complete lecture, laboratory and examination schedule for the students in pathology courses, g) establish a roster call schedule for students for their participation in autopsies, h) expand the technical and professional staff of the department, i) stimulate research activities, especially basic research, j) have a review demonstration of all slides to be studied in the General Pathology Laboratory exercises by one member of the staff before each laboratory session. All of these goals were reported to have been accomplished except for items (g) and (h). Although basic research had been established, it was limited in Dr. Schenken's opinion. It was difficult to get students out of classes for autopsies and funds were short in those days. Francis Smith, M.D. was brought into the department in 1956 by Dr. Schenken. Dr. Smith was a clinical pathologist and taught much of the clinical pathology to the students during the 1950's and 1960's. He retired in 1974.

ELECTRON MICROSCOPE

The first transmission electron microscope at the University of Nebraska Medical Center was a Philips 100 Electron Microscope that was ordered in 1957. The microscope was selected by a committee including Dr. John Latta of Anatomy and Dr. Harry McFadden of Medical Microbiology. It was originally housed in the North Building on the ground level. Mr. David Rhea was in charge of the instrument. Richard B. Wilson, M.D., a resident in the department of Pathology and Bacteriology, became interested in electron microscopy, in part because the microscope was available, and also because the literature now contained a few articles that were intriguing to him. He learned how to operate the microscope and prepare sections. Sectioning at that time was extremely difficult because a suitable microtome for electron microscopy was not readily available. Around 1958, the Anatomy Department eventually was able to get a Porter-Blum hand-driven microtome, and Dr. Wilson spent considerable time perfecting his ability to section and also spent two days in Kansas City learning about both sectioning and electron microscopy operation. Dr. Wilson began to work on various experimental subjects. In 1959, he began to do human tissue including kidney biopsies, liver biopsies, occasional skin biopsies, etc. At first these were done as purely experimental attempts to learn something about human disease by this method, but eventually these were reported as patient care service. Dr. Schenken and Dr. McWhorter were supportive of the early attempts to make something of the electron microscope in human pathology, and work continued on techniques as well as interpretation of electron micrographs. This activity has continued to the present, and there have been more than 2000 kidney biopsies as well as many tumors and occasional other specimens. The Philips 100 eventually came under Dr. Wilson's direction, and he assisted the Anatomy Department in training their graduate students in their thesis work.

In 1965 an RCA Electron Microscope was purchased and housed in the new Eppley Institute building, and it was also used in the study of biopsy material until 1968 when the Wittson Hall construction was complete enough for it to be moved to that building. The move was necessitated because of the arrival of Dr.

Phillipe Shubik's research group to the Eppley Institute. Dr. Shubik brought along a Philips 33 Electron Microscope from Chicago. A Philips 300 Electron Microscope was purchased which was also placed on the fourth level of Wittson Hall. In 1976 the Philips 100 was retired and a 201 Philips Electron Microscope was purchased. In recent years there has been increasing use of this electron microscope particularly for research purposes. In 1972 the Eppley Institute purchased a Scanning Electron Microscope which the Department of Pathology has been able to use for the production of teaching materials. Since the reinstitution of a laboratory experience for the medical students in Pathology, extensive use is being made of both scanning and transmission micrographs. Graduate courses in electron microscopy are now being given, and there has been considerable collaborative research.

NEW SPACE -

C.A. McWHORTER, M.D., CHAIRMAN

The Department of Pathology moved to a new area in 1962: the newly-completed clinic area of the Hospital. The first automation in the chemistry section had occurred in the middle 1950's with the acquisition of the Technicon autoanalyzer. Arden Engstrom, M.S., MT (ASCP) became Program Director of the Division of Medical Technology in 1964. In 1965, C.A. McWhorter, M.D. became chairman of the department following Dr. Schenken's resignation. Pathology staff at this time were: Harry W. McFadden, M.D., Morton Kulesh, M.D., Richard B. Wilson, M.D., Milton Simons, M.D., and Arthur L. Larsen, M.D. All of these physicians had received their residency training in the Department. Dr. McFadden spent several years as a member, then President of the American Board of Pathologists. Jerald R. Schenken, M.D., joined the



Department of Pathology & Microbiology
1957-1958

Front row, left to right: M. H. Kulesh, M.D., C. A. McWhorter, M.D., Milton Simons, M.D., and Harry W. McFadden, M.D. Back row, left to right: Arthur L. Larsen, M.D., Richard B. Wilson, M.D., Max Fitch, M.D., John Lang, M.D., and Francis Smith, M.D.

volunteer faculty in 1965. He would become instrumental in reshaping the teaching of Clinical Pathology into a lecture and case discussion format. Dr. Larsen was named Director of the Laboratories and Medical Director of the School of Medical Technology in 1965, succeeding Dr. Kulesh. Dr. J. Perry Tollman returned to the department as full-time professor in 1966 and Dr. Paul K. Greening joined the staff as an assistant professor with primary responsibilities in teaching residents and students.

During this time period, General Pathology was taught during the sophomore year and consisted of 99 hours of lectures and 176 hours of laboratory. Laboratory materials consisted of loan slide sets with worksheets, selected autopsy sets with case histories and worksheets, and gross demonstration specimens. The Clinical Pathology course consisted of 24 hours of lecture and 36 hours of laboratory. The laboratory experience in Clinical Pathology covered the broad range of laboratory tests including urinalysis specimens, chemical determinations, hematologic morphology, and chamber counts. During the junior year of medicine, the Clinical Pathology course was continued, with 40 hours of laboratory and 25 hours of lecture. Required of both junior and senior students during the third and fourth years was a Clinical Pathology Conference, held in the classic format: discussion of a case by a clinician and then a review of the pathologic findings by a staff pathologist. These were discontinued in 1969. Forensic medicine instruction, consisting of a series of twelve lecture/demonstrations, was given to the senior students because of the ever increasing importance of the legal aspects of medicine. This was discontinued in 1972.

MEDICAL TECHNOLOGY CHANGE

In 1968, the School of Medical Technology took a significant step: A consortium was formed among the medical technology undergraduate programs at the University of Nebraska Hospital, Bishop Clarkson Memorial Hospital and Nebraska Methodist Hospital into a Combined Program. Combined committee structures were created comprised of representation from the three institutions. Resources were brought together for didactic lectures given to the three groups of students combined. This consortium has worked very well and is one of the most successful programs of

its kind in the country. William G. Padgett, M.D., MT (ASCP) became a program official in the Division of Medical Technology in 1969 and Mary Jean Long, Ph.D., MT(ASCP) followed him in 1970.

A Graduate Program in Medical Technology offering the degree Masters in Pathology was instituted in 1969 through Dr. Arden Engstrom's efforts. Administrative, educational and technical subjects were offered as well as non-thesis research. Also during the 1960's, a School of Cytotechnology was founded, graduating students who successfully passed their registry examinations. Because of a lack of student applicants, the school was closed in the early 1970's.

The laboratories began to expand their capabilities in the 1960s, and the budget of the department was expanded along with growth of the residency program to eight positions. In 1969, William M. Berton, M.D. came to the department from the University of Tennessee Medical Center. Dr. Berton had long experience in the teaching program at the University of Tennessee and was responsible for revising and refining the teaching program at the University of Nebraska College of Medicine. He has been at the University of Nebraska Medical Center since 1969 and did a yeoman task in the interface between the faculty and the students and in setting up strict criteria for examinations. He retired in 1986.

Also joining the full-time staff in 1969 was Jerry W. Jones, M.D., with appointments in Pathology and Microbiology. He has continued with the department to the present time and is in charge of the medical microbiology laboratory, directs the course in Clinical Pathology and practices Forensic Pathology. In 1969, Dr. Paul K. Greening resigned. Also in 1969, C.A. McWhorter, M.D., Professor and Chairman of the Department of Pathology was elected to the prestigious position of President of the College of American Pathologists after having served on that body's Board for several years. Under Dr. McWhorter's leadership, the CAP acquired its present computer system in Traverse City, Michigan.

The building program of the University of Nebraska Medical Center under Dean Cicil Wittson, M.D. was expanded and a new hospital and Basic Science building were

planned in the late 1960's and 1970. In 1969, a new University Hospital was built expanding from 110 to 310 beds in the process. This added 4000 square feet to the clinical laboratories on the fourth level of the hospital. The new Basic Science Building (later named Wittson Hall), which was to house Anatomy, Microbiology and Pathology, was built during this period, and the Department of Pathology moved some of its functions into this building in early 1970. This added 24,000 square feet of space for teaching and offices for faculty and research laboratories for the department. There were specialized teaching rooms designed in this building for gross pathology presentation of fresh material and for the division of the class into groups for gross presentations. Unhappily, by the time the facilities were ready to be used with the aid of television monitors and other modern equipment, the laboratory for students was struck from the curriculum of the medical students because of the change to a three year program for the degree of Doctor of Medicine. Guy T. Haven, M.D., Ph.D., joined the staff in 1970, bringing his expertise in the area of clinical chemistry. He remained until 1981.

The pathology residency experience over the years had evolved to alternating six-month periods of anatomic and clinical pathology. Every resident would receive his first experience in anatomic pathology at University Hospital. Experienced residents would then rotate to a private laboratory to round out their experience in surgical pathology. All clinical pathology training was received at University Hospital. Senior residents could take electives in various areas including electron microscopy and subspecialty areas of clinical pathology. Experience was also provided in the forensic autopsy. Overall, the preparation of the residents was for the practice of General Pathology.

CHANGING CURRICULUM AND SERVICE LABS

In 1971, the laboratory sections of serology and microbiology expanded into the new space mentioned above after extensive remodeling. A Tissue Typing laboratory was also initiated at this time which has continued to the present. The Medical Curriculum had begun to undergo fundamental changes. Increased emphasis in the general curriculum was given to

clinical exposure in the freshman year of medical school. Accordingly, twelve hours of instruction in the freshman year were given by the department on cell reactions to injury. In addition, there was an Augmentation class enrolled in the College of Medicine which was, in fact, a class which would complete their medical studies in three years. The small group discussion format in Clinical Pathology, which had been instituted in 1968, was continued and improved. Private practitioners in pathology from several hospitals in Omaha took part in the small group discussions. A syllabus in **Clinical Pathology, a Case Study Approach**, edited by Jerald R. Schenken, M.D. was copyrighted in 1970. The total number of hours taught to the regular medical students in Anatomic and Clinical Pathology remained the same, but the Augmentation class allowed for one-half of the hours of instruction given the regular medical class. James Newland, M.D. joined the departmental staff in 1972.

During 1972-73, the course in Pathology taught to the medical students had to be extensively revised to adjust to changes in the general curriculum. Because of the separate three-year and four-year program in the medical curriculum, two different formats were devised for these two groups of students, and they were necessarily taught at different times. Modules of instruction were developed by Dr. Berton for the three-year students. In 1972, The Board of Regents of the University of Nebraska established the School of Allied Health Professions. This was within the College of Medicine, and the Division of Medical Technology became a part of the school.

A course in Basic Cell Pathology was instituted in 1972 during the quarter of instruction for the medical students, presented in such a manner that the usual prerequisite material in pathology was not required. In addition, these students received an introduction to Clinical Pathology to enhance their earlier patient contact. Discussion groups in Anatomic Pathology were instituted in 1973 using the case study approach as in Clinical Pathology.

By 1974, the College of Medicine had a regular three-year curriculum, and, according-

ly, the courses in Pathology were extensively revised. Three major courses in Pathology were offered: Basic Pathology, General Pathology, and Clinical Pathology. Basic Pathology was taught in the third quarter of the medical curriculum followed by General Pathology. The laboratory experience in Anatomic Pathology was discontinued due to drastically reduced teaching hours. General Pathology consisted of 168 hours while Clinical Pathology, essentially unchanged and unreduced was 78 hours. Basic Pathology comprised 56 hours.

A book, entitled **Laboratory Instrumentation** was written by members of the Department in 1974. It is presently in its third edition and has been quite successful. The editors are M. Robert Hicks, M.S., MT(ASCP), Mary Haven, M.S. and Jerald R. Schenken, M.D. Dr. James Newland became Medical Director of the Division of Medical Technology in 1975. Also in 1975, this Division received a federal education grant of five years from the Department of Health Education and Welfare. The grant request had been prepared by Dr. Arden Larsen.

There were several additions to the pathology staff in 1976; Judith A. Pester, M.D., who would later receive certification in Dermatopathology; Frank Martin, M.D., who had special expertise in cardiac pathology; Robert Shuman, M.D. a neuropathologist, and Richard Runge, M.D. The instruction to medical students remained essentially the same as outlined above. The Department was also teaching pharmacy and physical therapy students. Barbara Fricke, M.A., MT(ASCP) joined the staff as a program official in the Division of Medical Technology in 1976.

FOUR YEAR CURRICULUM RESTORED

At last, in 1978, the four year curriculum in medicine was restored. Basic Pathology, General Pathology, and Clinical Pathology were retained. There were 84 hours of instruction in Basic Pathology, 84 hours in General Pathology and 72 hours in Clinical Pathology plus 12, 12 and 24 hours of discussion group time respectively. It was also in 1978 that the Department initiated continuing education seminars for pathologists in cooperation with the Nebraska Association of Pathologists. It has continued to be successful. Dr. Frank

Martin resigned from the staff in 1978 while Ernest Kiser, Ph.D., a clinical chemist, joined the staff in Pathology.

In 1979, Mary Jean Long, Ph.D., MT(ASCP) retired. Barbara Fricke, M.A., MT(ASCP) resigned to become Program Director in Medical Technology at New Mexico. John R. Snyder, M.S., MT(ASCP) joined the Division also in this year. The laboratory was again expanded in 1979 with the addition of the Ambulatorium, now known as the Clinic Building. At this time, the laboratory was provided with an additional badly needed 10,000 square feet. It was through the efforts of Joseph C. Scott, M.D., Professor and Chairman of the Department of Obstetrics and Gynecology, that the department received space in this building. Special Chemistry, Serology, Tissue Typing and offices were moved into this new area. The growth of laboratory services now became explosive in number and variety, especially in the area of Chemistry. Much of the laboratory had become automated by this time. In 1980, Nicholas J. Pappas, M.D., a clinical chemist and pathologist, joined the staff.

PURTILO NEW CHIEF

In 1981, Dr. McWhorter resigned as chairman of the department and was replaced by David Theodore Purtilo, M.D. Dr. Purtilo, known for his research in immunopathology, genetics, and virology, greatly expanded the research capabilities of the department, bringing it national and international recognition. Dr. Samuel M. Cohen was named Vice-Chairman for Research and Education, while Dr. James R. Newland was named Director of Laboratories and Vice-Chairman for Diagnostic Services. New staff were recruited who greatly expanded the talents of the service portion of the department, now renamed the Department of Pathology and Laboratory Medicine to emphasize the clinical pathology aspect of the department. Publication increased logarithmically, and there was a heightened awareness of research in the department.

Additions to the staff in 1981-1982 were: David T. Purtilo, M.D.; Samuel M. Cohen, M.D., Ph.D.; David J. Volsky, Ph.D., a molecular biologist; Donald R. Johnson, Ph.D., an immunologist; P. Michael Olmstead, M.D., a dermatopathologist; and Bruce M. Mc-

Manus, M.D., Ph.D., a cardiopulmonary pathologist, and Helen Lipscomb, Ph.D., an immunologist. Leaving the full-time staff this time were G.T. Haven, M.D., Ph.D., A.L. Larson, M.D., Richard Runge, M.D., Dr. Robert Shuman, and Dr. Nicholas J. Pappas. Dr. Olmstead left the department in 1982.

Susan Langdon, MT(ASCP) became Chief Medical Technologist in 1982. Carl Ludvigsen, M.D., Ph.D., a clinical pathologist and clinical chemist joined the staff in 1983 as Director of Chemistry and Special Chemistry. Dr. John Snyder left the Division of Medical Technology in 1983 to become Program Director in Medical Technology at Ohio State University, while William Padgett, M.S., MT(ASCP) retired. Phyllis Muellenberg, M.A., MT(ASCP) became Acting Program Director, then Program Director in the Division. Also, joining the staff in 1983 were Leon B. Ellwein, Ph.D., an operations researcher; Dennis D. Weisenburger, M.D., a hematopathologist; James Linder, M.D., a surgical pathologist; and Shinji Hara-da, M.D., an immunologist.

In 1984, a laboratory program in Anatomic

Pathology was re-established for the medical students. Television was used along with selected slides for viewing with the microscope, gross specimens, electron micrographs and colored photographs. This format was well received and is being expanded and upgraded. Joining the staff in 1984 were Rodney D. McComb, M.D., a neuropathologist; Douglas M. Smith, M.D., Ph.D., an immunologist who directs Tissue Typing and the Blood Bank, and Jeffrey A. Huth, Ph.D., a clinical chemist. In this same year, 2000 square feet of space were received in the Swanson Center for establishment of a facility for research in Molecular Biology under the direction of Dr. Volsky. On April 1, 1984, the Department became the first in the College of Medicine to attain \$1 million in annual extramural grant support. In June 1985, Dr. Dennis Weisenburger became Director of Laboratories. Rodney Markin, Ph.D., M.D. joined the staff and was named Director of Chemistry in 1986, while Dr. Ludvigsen left the department in the same year.

Note: The authors wish to thank R. B. Wilson, M.D. for his invaluable help in the preparation of this history.

Abstracts for the Second Nebraska Symposium on Cancer and Smoking-Related Diseases

PAPERS

SUPPRESSOR T-CELLS, NATURAL KILLER CELL ACTIVITY AND TUMOR INCIDENCE IN AGING BC3F1 MICE. Heidrick, M.L., Hendricks, L.C., and Case, M.J., Dept. Biochem., Univ. Nebr. Col. Med. and Dept. Path., Clarkson Hosp., Omaha, NE 68105.

The incidence of spontaneous tumors increases with age in the BC3F1 mouse as does the number of suppressor T-cells. We assessed the age-related decline in natural killer (NK) cell activity to determine if there is a correlation between decreased NK activity, increased suppressor cells and tumor incidence. Seven groups of mice (5-15 mice/group) were assessed individually at ages 1-2, 4-5, 8-9, 14-15, 19-20, 23-24, and 31-32 mo of age for suppressor cells, NK activity and tumors. NK activity of spleen cells was determined at several target:effector cell ratios using ^{51}Cr -labeled YAC-1 cells as the target cells. The number of suppressor cells was assessed by fluorescence activated cell sorter analysis using a monoclonal antibody developed in our laboratory. Autopsies were performed immediately after sacrifice and tumors removed and fixed for histological evaluation. Tumors were first observed at 8-9 mo of age; 100% of the mice had tumors after 23 mo of age. NK activity decreased by 50% between the ages of 1 and 14 months, after which no further significant decline was observed. The increase in suppressor cells correlated with the increase in tumors and with the death rate of the mice, but occurred after NK activity had declined, indicating the suppressor cell increase is not responsible for the decline in NK activity. There also was no association between the NK activity of individual mice and the presence or absence of tumors. These data do not support the concept of NK cells comprising a tumor surveillance mechanism *in situ*. (Supported by State of Nebraska Department of Health).

FREQUENCIES OF REACTIVE CELLS TO AUTOLOGOUS LYMPHOBLASTOID CELLS (B-LCL) IN HEALTHY INDIVIDUALS AND IN PATIENTS WITH X-LINKED LYMPHOPROLIFERATIVE SYNDROME. Lai, P.K. and Purtilo, D.T., Departments of Pathology and Microbiology, Pediatrics and the Eppley Inst. for Research in Cancer, University of Nebraska Medical Center, Omaha, NE 68105.

To evaluate lymphoid cells important in defense against B lymphoblastoid cells (B-LCL) transformed by Epstein-Barr virus (EBV), we investigated the frequency of helper T (CD4) cells, cytotoxic T cells (CTL) and cells with natural killer (NK) activity in peripheral blood of healthy adults and in patients with XLP following stimulation with EBV-transformed autologous B-LCL. We found low numbers of T cells reactive to autologous B-LCL in seronegative individuals, but 50 to 100 fold higher frequency of these reactive T cells were detected in seropositive subjects: CD4 cells ranged from 1 per 5250 to 13,250 mononuclear cells and CTL ranged from 1 per 10^3 to 10^4 mononuclear cells. In contrast, 2 of the 3 patients had normal frequencies of reactive CD4 cells and only 1 had a normal frequency of CTL to autologous B-LCL. The estimated minimal frequency of NK cells in seronegative and seropositive healthy subjects and patients with XLP were similar: ranging from 1 per 7000 to 25000 mononuclear cells. These findings suggest that clonal expansion of antigen-specific T cells occurs in latently infected individuals, but the T cell repertoire in patients with XLP is deficient and may predispose them susceptible to EBV-induced lymphoproliferation. Supported in part by American Cancer Society Institutional Cancer Research Grant, #IN-165, PHS CA30196, awarded by the National Cancer Institute DHHS, and the Lymphoproliferative Research Fund.

THE EFFECT OF DIETARY FAT ON TUMOR METASTASIS Scholar, E.M. and Birt, D., Department of Pharmacology and the Eppley Institute, University of Nebraska Medical Center.

Experimental and epidemiological data have shown a strong positive correlation between the incidence and mortality from several types of cancer and dietary fat. In addition to the fact that the amount of fat in the diet can influence the progression of cancer the type of fat also has been shown to be important. Although very little is known about its effect on the metastases of tumors to secondary sites. Since the metastasis of a tumor is critical in determining the fate of a patient with cancer it is very important to determine how dietary fat affects this process. The objective of this project was to determine how different amounts and types of dietary fat influence the metastatic potential of two murine tumors, the Lewis Lung carcinoma and the BALB/c mammary carcinoma. Mice are fed diets containing high (24.6%) or low (5%) amounts of saturated (beef tallow) or unsaturated (corn oil) fat. Diets are prefed to the mice for eight weeks. Tumor cells are then injected into the footpad and several weeks later the number of lung metastases are determined. Results have shown that the Lewis Lung tumor had a shorter latent period and grew at faster rates in mice given the high fat diets as compared to mice fed with low amounts of fat. In contrast to tumor growth, the number of lung metastases was significantly lower in the mice fed either of the two high fat diets in comparison to those fed the low fat diets. Similar experiments using the BALB/c mammary carcinoma are in progress. This research supported by grant 87-41 from the Nebraska Department of Health and ACS Institutional Grant IN165.

MULTIPLE FORMS OF HIGH MOLECULAR WEIGHT TRANSFORMING GROWTH FACTORS. Rizzino, A. and Ruff, E. Eppley Institute, Univ. Neb. Med. Ctr. Omaha, NE.

The urine of many cancer patients contain growth factors referred to as high molecular weight transforming growth factors (HMW-TGFs). Thus far, HMW-TGFs have not been extensively studied and they are characterized by their molecular weight (20-35 KD) and their ability to induce the soft agar growth of NRK cells. During our initial efforts to characterize HMW-TGFs, we determined that the soft agar growth of NRK cells could be induced by different combinations of four growth factors: TGF- α , TGF- β , platelet-derived growth factor (PDGF), and fibroblast growth factor (FGF). Moreover, we have determined that PDGF and FGF can induce the soft agar growth of several non-transformed cell lines. Consequently, we sought to determine the extent to which PDGF and FGF are responsible for the activity of HMW-TGFs. We have addressed this question by identifying several human tumor cell lines that produce HMW-TGFs. We have determined that some human tumor cell lines produce TGF- α , TGF- β and a PDGF-related growth factor. TGF- α and TGF- β were identified by radioreceptor assays for TGF- α and TGF- β , respectively. The PDGF-related growth factor was identified by two assays, a bioassay and a radioreceptor assay, that are specific for PDGF. We have also determined that some tumor cell lines produce HMW-TGFs, but do not produce TGF- α or TGF- β . We have demonstrated that one of these cell lines produces both a PDGF- and a FGF-related growth factor. The FGF-related growth factor was detected by an assay specific for FGF. These results argue that HMW-TGFs present in the urine of cancer patients may be due to one or more growth factors related to TGF- α , TGF- β , PDGF, and FGF. This research was supported by grant LB 85-58 from the Nebraska Dept. of Health.

THE ROLE OF INTERLEUKIN-2 IN T LYMPHOCYTE IMMORTALIZATION, Johnson, Donald R., Klassen, Lynell. Department of Pathology and Microbiology and the Eppley Institute for Research on Cancer and Allied Diseases, Department of Medicine, University of Nebraska Medical Center, Omaha, Nebraska.

T lymphocytes from marmoset monkeys can be immortalized by the oncogenic virus Herpesvirus atelae (HVA) leading to continuously proliferating lymphoid cell lines. These transformed lines are independent of exogenously added growth factors and maintain immunologic function associated with T lymphocytes. It has been proposed that cell immortalization occurs by HVA-mediated activation of a physiological T cell activation pathway through the induction of T cell growth factor (interleukin-2, IL-2), creating an autocrine stimulation loop. Thus the virus transformed cell will be dependent upon, and responsive to a constitutively produced T cell growth factor. HVA transformed T cell lines were tested for structural and functional presence of IL-2 receptors, the ability to release IL-2 into the cultured supernatant, and influence of IL2 on cell proliferation. Four cell lines tested had high percentages of IL-2 receptors measured by immunocytofluorometry and all responded to purified IL-2 by increased proliferation. In addition, all the HVA cell lines produced IL-2, detected by a biological assay system. Inhibition of IL-2 by dexamethasone or monoclonal antibodies to IL-2 resulted in decreased cellular proliferation. These results suggest that HVA transformed cell lines constitutively produce IL-2, respond to exogenously added IL-2, are dependent on IL-2 production for continued proliferation. Thus virus induced IL-2 production may play a critical role in the multistep transformation of T lymphocytes. Supported in part by PHS grant #CA32969 and ACS grant #IN165.

EFFECTS OF NICOTINE ON NIGROSTRIAL DEVELOPMENT. Zeng, Wanyun, Murrin, LCharles, Dept. of Pharmacology, Univ. of Nebraska Med. Ctr., Omaha, NE 68105

Many studies indicate a strong relationship between exposure to nicotine *in utero* via maternal smoking and increased incidence of CNS developmental problems, particularly learning and behavioral disorders such as attention deficit disorder (ADD). Other studies suggest an involvement of the nigro-striatal dopaminergic pathway in ADD and nicotine has been shown to affect normal activity in these neurons in adults and neonates. We examined the effects of prenatal exposure to nicotine on the development of the rat striatum, the terminal region of this dopaminergic pathway. Initial studies demonstrated that the optimum method of delivering nicotine to rats was via osmotic mini-pumps. With this technique plasma levels of nicotine and cotinine, the major metabolite of nicotine, were directly correlated with dose of nicotine delivered. Plasma levels of nicotine in the same range as found in humans smoking 1 pack of cigarettes per day could be reliably reproduced, and this level did not affect maternal food and water intake or weight gain. It also had no significant effect on pup weight gain for at least two weeks postnatally. Exposure to this level of nicotine did produce significant alterations in markers for dopamine neurons and cholinergic neurons in the striatum at 14 days postnatally. In subsequent studies we have examined in depth the effects of nicotine exposure prenatally on the development of neuronal markers at several ages postnatally. Sex of the animal was included as a factor. This study was supported by grants 86-09R, 85-44, 84-38 from the state of Nebraska.

IMMUNOHISTOCHEMICAL ANALYSIS OF THE EXTRACELLULAR MATRIX OF HUMAN BRAIN TUMORS. McComb, Rodney D., and Moul, Jane M., Department of Pathology and Microbiology, University of Nebraska Medical Center.

The extracellular matrix (ECM) plays an important role in tumor invasion and metastasis. Although human brain tumors (gliomas) do not usually spread outside the nervous system, they are highly invasive locally and have a propensity to metastasize throughout the cerebrospinal fluid. These features contribute significantly to the therapeutic resistance of gliomas. In the present study, the expression and distribution of several ECM components, including laminin, fibronectin, collagen type VI, GMEM protein, and several sulfated proteoglycans (glycosaminoglycans) were examined immunohistochemically in a series of human gliomas using rabbit antisera and murine monoclonal antibodies. Laminin, fibronectin, and collagen type VI codistributed in the hyperplastic vasculature, but none of these macromolecules was associated with glioma cells. In contrast, tumor cells and reactive vascular cells both expressed the GMEM protein. 4-sulfated chondroitin/dermatan sulfate was intensely expressed by the vasculature in all tumors, but its association with glioma cells varied from diffuse to focal to absent. Keratan sulfate was detected focally in occasional tumors. These results demonstrate that the ECM of brain tumors differs from that of non-neural neoplasms. The GMEM protein is a consistent and widespread component of the extracellular matrix of most human gliomas and therefore of potential significance in the process of glioma invasion.

This research supported by grant LB506 85-35 and 86-07R.

ENHANCEMENT OF FANFT INDUCED CARCINOGENESIS BY URINARY TRACT INFECTION Johansson SL, Anderstrom C, Larsson P; Department of Pathology and Microbiology, University of Nebraska Medical Center, Department of Urology and Microbiology, University of Goteborg, Sweden

Epidemiological studies suggest that urinary tract infection is an important risk factor in the development of bladder cancer. Urinary tract infection in rats is associated with urothelial hyperplasia. In the Sprague Dawley strain, exposure to the 5-nitrofurantoin N-[4-(5-nitro-2-furyl)-2-thiazolyl] formamide (FANFT) is associated in particular with the development of renal pelvic tumors. The present study was designed to evaluate whether chronic urinary tract infection could enhance tumor development in FANFT induced urinary tract carcinogenesis. Female Sprague Dawley rats (144) were divided into the following groups. Group 1 received 0.2% FANFT in the diet for seven weeks followed by control diet. Group 2 received 0.2% FANFT in the diet for seven weeks followed by control diet. One week after completion of FANFT administration the suspension of 0.5 ml E. Coli (06K13H1) was injected into the bladder through the urethra. Group 3 received 0.2% FANFT in the diet for seven weeks followed by control diet. One week after completion of FANFT administration a suspension of heat killed E. Coli (06K13H1) was injected into the bladder through the urethra. Group 4 received a suspension of 0.5 ml E. Coli (06K13H1) through the urethra and received control diet throughout the experiment. Group 5 was fed control diet only. The experiment continued for 104 weeks. A significantly higher number of urinary tract tumors, particularly of the renal pelvis was recorded in Group 2 compared to Group 1, 3, 4, and 5. The majority of the rats in Groups 2 and 4 had morphological signs of urinary tract infections, particularly pyelitis and/or pyelonephritis. Thus, a single injection of E. Coli (06K13H1) into the bladder results in an enhancement of FANFT induced urinary tract carcinogenesis in the Sprague Dawley rats, especially for renal pelvic tumors. The formation of dimethyl nitrosamine or other nitroso compounds from nitrates in the urine or increased cell proliferation due to chronic inflammation or both may be important pathogenetic factors in the tumor development. This research supported by grants from the Swedish Cancer Society and Dept. of Pathology and Microbiology, UNMC.

ACCELERATION OF PAPILLOMA GROWTH IN MICE FED HIGH FAT DIET DURING PROMOTION OF TWO-STAGE SKIN CARCINOGENESIS. Birt, D.F., Pelling, J.C., Tibbels, M.G., Schweickert, L. Eppley Institute for Research in Cancer, University of Nebraska Medical Center, Omaha, NE 68105-1065.

Female SENCAR mice were treated on their shaved backs with 10 nmole 7,12-dimethylbenz(a)anthracene (DMBA) at 7 weeks of age. One week later they were divided into four dietary treatment groups: 1) low fat (5% corn oil), 12-O-tetradecanoylphorbol-13-acetate (TPA)-treated; 2) high fat (24.6% corn oil), TPA-treated; 3) low fat, acetone-treated (15 mice); 4) high fat, acetone-treated (15 mice). After 11 weeks of promotion we observed 8.4 ± 4.9 (standard deviation) tumors per mouse in the low fat-TPA group and 9.2 ± 5.4 tumors per mouse in the high fat TPA group. No tumors were observed in non-TPA treated groups. The size distribution of tumors ≤ 1 mm, 2-3 mm, 4-5 mm and ≥ 6 mm was 66, 27, 7 and 0% in the low fat group and 49, 42, 6 and 3% in the high fat group, indicating a higher proportion of tumors with small diameters in the mice fed low fat diet. After 21 weeks of promotion with TPA differences in tumor sizes between the diets were not apparent. Mice fed low fat diet had 5, 29, 29 and 31% of their tumors in the category of ≤ 1 mm, 2-3 mm, 4-5 mm or ≥ 6 mm and mice fed the high fat diet had 10, 26, 21 and 44% of their tumors in these size categories. An average of 9.8 papillomas/mouse were observed in the low fat groups and 8.9 papillomas/mouse in the high fat group at this time. Body weights were elevated in mice fed high fat diet and reduced in mice treated with TPA as indicated by the data at 20 weeks of TPA treatment: low fat-without TPA, 39 gm; low fat-with TPA, 35 gm; high fat-without TPA, 53 gm; high fat with-TPA, 41 gm. Thus the more rapid growth of mouse skin tumors in mice fed high fat diets may be related to the intake of excess calories and/or more rapid growth. This research was supported by Grants R01 CA31655 and R01 CA40847 from NCI.

MODELING OF BLADDER CARCINOGENESIS IN RISK ASSESSMENT. Ellwein, Leon B., and Cohen, Samuel M., University of Nebraska Medical Center.

Risk assessment as applied to the carcinogenic evaluation of chemical compounds generally entails the statistical fitting of a mathematical expression to experimental dose-response data followed by extrapolation to estimate low dose response. The biological realism of risk assessment methodology can be enhanced through computer-based modeling of the carcinogenic process. A probabilistic model has been developed which represents urinary bladder carcinogenesis at the cellular level with emphasis on quantification of cell dynamics: cell mitotic rates, cell birth and death rates, and irreversible transitions from normal to initiated to malignant cell states are explicitly accounted for. Model validation is based on cell kinetic and tumor incidence data from a series of experiments in rats, where cell initiation is induced by both chemical and physical means followed by chemical stimulation to maintain an enhanced level of cellular activity and proliferation. Analyses demonstrate the sensitivity of tumor incidence to the timing and magnitude of changes to these cellular variables. This research was supported by grants #85-17 and #86-14 from the Cancer and Smoking Disease Research Program, LB506, Nebraska Department of Health.

APPLICATION OF THE MRFIT SMOKING CESSATION PROGRAM TO A NORMAL POPULATION. McIlvain, Helen E., McKinney, Mark E., Todd, Gordon L., Thompson, A. Veronica. University of Nebraska Medical Center, Omaha NE.

The MRFIT program attempted to reduce blood pressure, smoking behavior, and serum cholesterol level in men at high risk for coronary heart disease. Four months after the completion of a 10-week smoking intervention trial, 43.9% were reported nonsmokers. We wanted to see if this program would be similarly successful with a mixed-sex population without high risk. Two test sites (I and II) were employed. Fifty-six persons completed all phases through 4-month followup. Participants at each site were randomly assigned to either treatment (T) or control (C) conditions, and the C group later received intervention. These groups did not differ on demographic or smoking history variables. The intervention led to significant decreases in smoking behavior at the end of group (T=61.3%; C=7.4%). For the C group, the quit rate was 37.0% after intervention. The T groups showed a significantly higher quit rate ($p < .05$) immediately following intervention. At 4-month followup, average quit rate (all groups) was 32.2%. In those who did not quit, there was a significant mean reduction in number of cigarettes smoked for all groups (28.0 vs 17.4) at 4-month followup, as well as a reduction in dosage score (7.3 vs 6.0) at followup, indicating this group, while still smoking, was smoking less. Assessment of expired carbon monoxide (CO) levels and saliva thiocyanate levels was conducted at each screening, and these variables correlated significantly with self-reported number of cigarettes currently being smoked per day. In this less motivated, more heterogeneous group of persons, the smoking cessation program remains effective. This research supported by Nebraska Dept. of Health grant 87-02BR.

ENVIRONMENTAL EPIDEMIOLOGY OF NON-HODGKIN'S LYMPHOMA (NHL) IN EASTERN NEBRASKA. Weisenburger, D.D., Schmidt, H., Steele, S.J., Babbitt, P.R., and Armitage, J.O. University of Nebraska Medical Center, Omaha, NE 68105.

The incidence of NHL in persons older than 21 years in the 66 counties of eastern Nebraska was 17.6/100,000 (15.7 expected) for 1984. Histologic analysis of NHL in the Nebraska Lymphoma Registry revealed a marked decrease in follicular small cleaved NHL (3% vs. 22.5% expected) and a marked increase in diffuse large cell NHL (48% vs. 27.6% expected). Data from the 1982 U.S. Census of Agriculture was used to stratify 22 counties with the highest and lowest corn production, and usage of commercial fertilizers, total pesticides, herbicides, and insecticides. The age-standardized incidence of NHL for each group of 22 counties (co.) was:

	Corn	Fert.	Pest.	Herb.	Insect.
Low co.	22.1	13.9	17.1	15.9	20.5
High co.	15.2	19.5	15.9	17.9	16.3
p =	0.0004	0.004	0.26	0.15	0.02

The age-standardized incidence of NHL in the seven counties with the highest fertilizer use was 25.2/100,000 (vs. 13.9, $p = 0.00001$). Levels of nitrates in well water for 1978-79 were also used to stratify the 66 counties. The age-standardized incidence of NHL in the 25 counties with less than 10% of wells contaminated by nitrates (>10 ppm) was 11.6 versus 21.0/100,000 in the 25 counties with greater than 20% of the wells contaminated ($p = 0.00001$). These findings suggest that the increased incidence and abnormal distribution of NHL in eastern Nebraska may be related to intense use of nitrogen fertilizers and resultant groundwater contamination. This research supported by grant 86-59 from the Nebraska Department of Health.

CLINICAL AND LABORATORY STUDIES OF THE SYNERGISTIC COMBINATION OF HYDROXYUREA (HU) WITH 4'-(9-ACRIDINYLAMINO)METHANESULFON-M-ANISIDIDE (AMSA) AND CYCLOPHOSPHAMIDE (CY) FOR ACUTE MYELOCYTIC LEUKEMIA (AML). W.P. Vaughan. Univ. of Nebraska Medical Center, Omaha, NE. HU, AMSA and CY all have activity against resistant AML and HU has been shown to enhance the toxicity of AMSA against L1210 mouse lymphocytic leukemia *in vitro*. Consequently, we began a clinical trial of CY, AMSA and HU for refractory AML. At the same time laboratory studies are being conducted in a rat model for AML to determine whether there is synergy of this combination *in vivo* and to define the dose and schedule parameters which will maximize the therapeutic index of these drugs in humans. In the rat HU alone at one-half maximum tolerated dose (MTD) produces no increase in survival but in combination with CY or AMSA significantly prolongs survival over the effect of these drugs alone. AMSA/HU synergy has been demonstrated in both low and high tumor volume states:

Survival, days	Low tumor volume	High tumor volume
beyond controls	AMSA(2mg/kgQDx4)	AMSA CY(100mg/kgX1)
Median(range)		

without HU	10(9-12)	5(5-8)	29(25-32)
with HU(150mg/kgQ8hX4d)	18(16-33)	10(4-13)	37(36-42)

Further studies show that AMSA and HU in combination can be given at doses higher than one-half MTD of the individual drugs. In the clinical trial CY 2.5 gm/M² is followed 10 days later by AMSA 1125mg/M²/d and HU 6 gm/M²/d for 3d. Nine patients with AML unresponsive to standard treatment have been treated and all patients achieved marrow aplasia. Seven of these patients achieved complete remissions (1-14+ mos). The combination of HU with CY and AMSA is synergistic *in vivo* in rat and human AML. Further studies will establish the mechanism of this synergy. Supported by NE Health Dept grant #86-58.

CULTURE OF HUMAN BONE MARROW STEM CELLS AND STROMA LEADS TO THE DETECTION OF TUMOR CELLS CONTAMINATING HISTOLOGICALLY NORMAL BONE MARROW. Sharp J.G., Mann S.L., Joshi S.S., Kessinger M.A., Crouse D.A., Weisenberger D.D. and Sanger W.G. Depts. of Anatomy, Radiology, Pathology/Microbiology, Internal Medicine & Pediatrics, UNMC, Omaha.

Studies in the mouse have suggested that one function of hematopoietic stroma is to maintain primitive marrow stem cells by protecting them from differentiation pressures. The initial objective of our studies was to determine if human bone marrow stromal cells had a similar role in promoting the maintenance of stem cells in culture, and in frozen aliquots of bone marrow harvested and stored for future transplantation. Successful culture techniques were developed using cells recovered from the stainless steel screens used to filter the entire marrow harvest. Surprisingly, abnormal appearing cells were found in cultures of histologically normal bone marrow. Cultures established from the marrow of 13 patients with solid tumors revealed the suspected presence of occult tumor cells similar to the patient's primary tumor in 6 cases. The presence of tumor cells has been confirmed by either histochemical, immunocytochemical or cytogenetic techniques in 5 of these 6 cases. A preliminary analysis of a marrow sample which had been frozen for 17 months demonstrated that malignant melanoma cells, as well as stem cells and stromal cells, survived freezing. These observations suggest that tumor cells may be re-infused into marrow transplantation recipients more frequently than previously suspected. The clinical significance of these observations is currently unknown, but clearly deserves attention. (Supported by Nebraska Department of Health LB506 Funds)

ROLE OF EPSTEIN-BARR VIRUS (EBV) IN B CELL LYMPHOMAGENESIS IN PATIENTS WITH HODGKIN'S DISEASE. Purtilo, D.T.^{1,2,3}, Davis, J.¹, Sinangil, F.¹, Volsky, D.J.¹, List, A.⁴, Sklar, J.⁵, Departments of Pathology & Micro.¹, Pediatrics², and the Eppley Inst.³, University of NE Med. Center, Omaha, NE 68105-1065, Vanderbilt University⁴, Nashville, TN, Department of Pathology⁵, Stanford University, Palo Alto, CA.

The etiological basis and origin of the malignant cells in Hodgkin's disease (HD) remains obscure. Since the majority of patients show immune deficiency, EBV can become reactivated. To evaluate the potential role of EBV in the genesis of B cell lymphomas we studied lymph node biopsy specimens of 24 patients including 22 newly diagnosed HD and 2 who had developed non-Hodgkin's lymphoma many years after radiation therapy. High molecular weight DNA of the tissues was probed for EBV genome using the Bam HI K fragment in slot blot and the CM30 (-99 cosmid) clone in Southern blot analyses. For immunoglobulin gene rearrangements, we used the J_H probe. Germline configuration of the T cell receptor was observed; however, small oligo- or mono-clonal B cell populations in many nodular sclerosing types of HD were found. Both nonHodgkin's lymphomas were monoclonal, contained abundant EBV genome, and the patients showed defective antibody responses to EBV. In addition, 5 of 22 of the HD biopsy specimens contained EBV genome. These results suggest that EBV may play an etiological role in non-Hodgkin's lymphoma in patients in remission with HD. The finding of EBV genome in the 5 HD tissues suggests that rarely a monoclonal B cell lymphoma carrying EBV genome emerges in long term survivors. Supported by the State of Nebraska Department of Health, LB506.

HIGH-DOSE THERAPY WITH AUTOLOGOUS BONE MARROW TRANSPLANTATION FOR ADVANCED SOFT TISSUE SARCOMA. Kessinger, Anne, University of Nebraska Medical Center, Omaha, NE 68105.

Soft tissue sarcomas that progress after potentially curative primary therapy and are not curable with any other conventional approach as well as those that present with metastatic disease may respond to standard dose chemotherapy for a few months, but routinely result in the patient's death in less than a year. In an effort to determine if high dose therapy with autologous bone marrow transplantation improves the outlook for patients with otherwise incurable soft tissue sarcoma, we designed the following therapeutic protocol: DTIC 250 mg/M² IV days 1-4, adriamycin 20 mg/M² IV as a continuous 24 hour infusion days 1-3, cyclophosphamide 60 mg/M² IV days 4 and 5, and total body irradiation 12 Gy fractionated over days 6-10. Previously collected and cryopreserved autologous marrow is thawed and immediately infused on day 10. Adriamycin is omitted if the patient had received that drug earlier in his/her course and total body irradiation is omitted if the patient had received earlier radiation therapy in truncal areas. Eight patients have been treated with this program; 3 achieved a complete response, 1 a partial response, 2 experienced progressive disease and 2 were not evaluable for response due to early death. Three deaths associated with the therapy occurred; one due to tumor necrosis with lethal hemorrhage and two due to sepsis during leukopenia which was aggravated by rapidly progressing disease in one patient. For evaluable patients the response rate was 67% and the complete response rate was 50%, superior to responses seen with conventional therapy. In view of the small number of patients treated, conclusions regarding the usefulness of this approach await further study and patient accrual.

THE GALL GRANULE IN LEUKEMIAS. Marcus JN & Hurtubise PE, Departments of Pathology, Schools of Medicine, Creighton University, Omaha, NE 68178 and University of Cincinnati, Cincinnati, OH 45267.

We have shown that the lymphocyte Gall body (GB), a conspicuous, usually solitary $\frac{1}{2}\mu$ cytoplasmic lipid spherule best observed supravitaly, segregates mainly in the T helper (T4) fraction and is present in all thymocyte maturation stages. Here we extend these observations to neoplastic cells and show that the GB, in parallel fashion, segregates with lymphoid leukemias of thymus lineage and helper phenotype. Leukemic cells from 42 patients were studied for T and B cell surface markers, unifocal cytoplasmic acid esterase (FAcE) (an enzyme partially associated with the GB), and the presence of the GB by phase microscopy. Eleven leukemias with an appreciable fraction (>15%) of GB+ neoplastic cells were FAcE+ non-B or "null" lymphoid types. Two of these were mycosis fungoides/Sézary leukemias, and another, a chronic lymphocytic leukemia (CLL); all formed rosettes with sheep red cells (E+) and were of mature (T3+) helper (T4+) surface phenotype. The 8 others were acute lymphoblastic leukemias (ALLs), 3 with T phenotypes in young adults with mediastinal masses, and 5 with "null" phenotype (in older nomenclature), 2 of which were CALLA antigen positive. The 21 GB- leukemias averaged only 1.5% GB+ cells: 11 were lymphoid (7 FAcE+ B CLLs, 3 FAcE+ "null" ALLs, 1 suppressor T8+ CLL), 11 were non-lymphoid, and 5 were unclassified. One FAcE+GB+ "null" ALL was misdiagnosed as acute myeloblastic leukemia (AML) by a hematologist; after failing 2 inductions with AML chemotherapy, the patient went promptly into remission when switched to ALL chemotherapy. From this small patient sample, it appears that the absence of the GB in leukemic cells is non-diagnostic, but its presence strongly suggests a lymphoid cell of T lineage.

"ACTIVATED v-myc and v-ras DNCGENES DO NOT TRANSFORM NORMAL HUMAN LYMPHOCYTES", Stevenson, Mario and Volksy, David, Dept. of Pathology & Microbiology, University of Nebraska Medical Center, Omaha, Nebraska 68105

Activated v-myc (pSVv-myc) and v-Ha-ras (GT-10) oncogenes were introduced into normal human lymphocytes, NIH-3T3 fibroblasts, B-lymphoblastic cells, and human epithelial cells, using a reconstituted Sendai virus envelope-mediated gene transfer technique. Efficient transfer of plasmid in each cell type was demonstrable within 1½ hrs of transfection by Southern blotting of extrachromosomal DNA extracts, which unexpectedly revealed that v-myc plasmid DNA was unstable in normal lymphocytes but not in the other cell types. The v-myc plasmid was stabilized when cotransfected into lymphocytes together with v-Ha-ras. The transfected v-Ha-ras plasmid was stable in all the cell types tested. v-myc plasmid expression was clearly detectable by 5 hrs in all cell types except human lymphocytes. Lymphocytes expressed v-myc when transfected together with v-Ha-ras. Transfected ras oncogene was efficiently expressed in all the cell types tested. Expression of the transfected genes increased at 24 and 48 h after transfection. Even though plasmid stability and expression were achieved in myc-ras cotransfected lymphocytes, no effects on cellular DNA synthesis or immortalization were observed, in contrast to efficient transformation of NIH-3T3 fibroblasts by the same procedure. Our data suggest that efficient expression of transfected myc and ras oncogenes in normal quiescent human lymphocytes is not sufficient for the induction of cell growth and immortalization.

This research supported by grant LB-506, #85-72.

ELEVATED HA-RAS EXPRESSION IN DMBA-INDUCED MOUSE SKIN TUMORS PROMOTED BY BENZOYL PEROXIDE. Pelling, J., Neades, R., Fischer, S., and Schweickert, L. Eppley Institute for Cancer Research, and Dept. of Biochem., Univ. Neb. Med. Ctr., Omaha, NE. and Univ. Texas System Cancer Ctr., Smithville, TX.

It has been demonstrated that carcinogenesis in a number of tissues and species can be divided into two stages, initiation and promotion. Furthermore, studies have shown that the stages involved in carcinogenesis are often accompanied by oncogene activation and/or altered patterns of oncogene expression. We have employed the two-stage skin carcinogenesis model in SENCAR mice to determine whether alterations in Ha-ras proto-oncogene expression occur at various times during tumor development *in vivo*. SENCAR mouse epidermis was screened for levels of Ha-ras RNA at various times following initiation with 7,12-dimethylbenz(a)anthracene (DMBA) and promotion with benzoyl peroxide, a free-radical generator. Using Northern blot hybridization analysis, we observed a significant elevation in the level of Ha-ras polyadenylated RNA in papillomas at various stages of tumor progression, as compared with untreated epidermis or pre-neoplastic epidermis. Southern blot hybridization analysis of restricted tumor DNA demonstrated that the enhanced expression of Ha-ras RNA was not due to gene amplification. Experiments are underway to establish whether the Ha-ras sequence has undergone a point mutation at the T24 or 61st codon, both of which have been shown by others to be hot-spots of Ha-ras gene alteration.

This research supported by NCI grant CA4D847.

STRUCTURE AND EXPRESSION OF CHORIOGONADOTROPIN GENES IN HUMAN TUMOR CELL LINES. Cox, G. S., Cosgrove, D. E., Campain, J. A. and Sullivan, T. T., Dept. of Biochem., Univ. Neb. Med. Ctr., Omaha, NE 68105.

In efforts to better understand the molecular basis of gene derepression as frequently manifested in neoplasia, we have examined the production of human chorionic gonadotropin (hCG) and its free α - and β -subunits by a variety of cell lines derived from either trophoblastic or nontrophoblastic tumors. RNA dot blot hybridizations indicate that those cell lines producing the isolated α - or β -subunits produce the corresponding mRNA, and that mRNAs for both subunits are present only when intact hCG is synthesized. Gene dosage was estimated for each subunit by quantitative DNA dot blot hybridization, and each of the cell lines examined contains equivalent gene copies for each subunit. The degree of methylation of genes encoding human growth hormone (nonexpressed), β -actin (constitutively expressed) and α -subunit (differentially expressed) was determined using restriction endonucleases HpaII and MspI. These enzymes are isoschizomers which differentially cleave at the same recognition sequence (5'CGG3') depending on which C residue is methylated. Both β -actin and hGH were methylated to a similar extent in each of the cell lines examined, whereas the α -subunit gene was differentially methylated. In contrast to a number of other systems, the gene was hypomethylated in cell lines not expressing the subunit. In addition, a restriction fragment polymorphism involving the α -subunit gene, which occurs in only 6% of DNA samples isolated from normal term placenta and peripheral lymphocytes, was noted in DNA from 75% of the tumor cell lines examined. This suggests that structural changes in or around the α -subunit gene may correlate with the occurrence of, or propensity for, certain types of neoplasia. Supported by Grant #86-09 from the Nebr. Dept. Health.

CA 19-9 AND LEWIS ANTIGEN EXPRESSION IN PANCREATIC CANCER. Tempero MA, Uchida E, Takasaki H, Burnett D, Pour PM. Department of Internal Medicine, University of Nebraska Medical Center and Eppler Institute. CA 19-9 antigen, a sialylated Lewis (Le) blood group antigen, is a biomarker for pancreatic adenocarcinoma. Sensitivity of elevated CA 19-9 antigen (> 37u/ml) in sera of pancreatic cancer pts has been reported to range between 76 and 95%. The following study clarifies the relationship of Le antigen phenotype with CA 19-9 expression in tumor and serum further defining the clinical utility of this biomarker. Twenty pancreatic cancer biopsies (primary or metastatic) were analyzed for Le^a, Le^b and CA 19-9 expression using an immunoperoxidase technique with specific monoclonal antibodies (Mab). Le antigen phenotype was determined in saliva (ELISA assay) or RBC (hemagglutination assay). CA 19-9 serologies were quantitated with an RIA using specific Mab (Centocor). Le^a Le^b negative individuals (n=2) failed to express CA 19-9 antigen in tumor or in serum (low or subnormal levels). Elevated serum CA 19-9 levels were predicted by positive immunohistology in all but two cases. Inappropriate (variation from salivary/RBC phenotype) Le antigen expression in a high percentage of malignant cells occurred in 80% of cases. 80% of all pts and 90% of Le positive pts had elevated serum CA 19-9 levels. These results suggest the following: 1) CA 19-9 expression will not occur in individuals with a negative Le antigen phenotype, 2) the sensitivity of serum CA 19-9 levels in pancreatic cancer pts will increase if analysis is restricted to pts with a positive Le antigen phenotype and 3) the high incidence of inappropriate Le antigen expression in pancreatic cancer tissue suggests that Le antigen levels in serum may be abnormally elevated and may prove to be useful biomarkers in this disease. This research is supported by grant CA 38922 (NCI).

THE ROLE OF CELL SURFACE GLYCOSYLATION ON RAW117 MURINE METASTATIC LYMPHOMA CELLS. Joshi S. S., Weisenburger D. D. and Sharp J.G., Depts. of Pathol. & Microbiol. and Anatomy*, Univ. of Nebr. Medical Center, Omaha, NE 68105.

Surface glycoconjugates have been shown to play a major role in the regulation of cell growth and differentiation. Although the presence of such glycoconjugates has been demonstrated on tumor cells, their role in the malignant and metastatic behaviour of tumor cells is not known. Using an experimental murine lymphoma metastasis model, consisting of the highly malignant/metastatic RAW117-H10 cell line and its parental less malignant/metastatic RAW117-P cell line, we have studied the role of cell surface glycoconjugates in the behaviour of these cells. Flow cytometric analysis revealed the differential expression of certain glycoproteins and glycolipids on RAW117 lymphoma cells. RAW117-H10 cells, expressed low levels of non-sialylated glycoconjugates and were resistant to natural killer (NK) cell mediated cytotoxicity. In contrast, the RAW117-P cells expressed high levels of non-sialylated glycoproteins and were sensitive to NK cell mediated cytotoxicity. The metastasis-associated glycoconjugates were non-cytolytically removed from the cell surfaces by short-term treatment with n-butanol. The *in vivo* malignancy of butanol-treated RAW117-H10 cells was decreased significantly and their NK susceptibility was increased considerably. When butanol-treated cells were cultured *in vitro* to regenerate their cell surface molecules, they regained their *in vivo* malignant/metastatic potential and NK cell resistance. Electrophoretic analysis of the butanol-extracted molecules revealed the presence of four glycosylated molecules unique to malignant/metastatic RAW117-H10 cells. Thus, our results demonstrate the presence of surface glycoconjugates which appear to regulate the malignant behaviour of RAW117 lymphoma cells. (Supported by Nebr. Dept. of Health LB506 funds).

INTERACTION OF THE 4S POLYCYCLIC AROMATIC HYDROCARBON BINDING PROTEIN WITH THE RAT CYTOCHROME P450c GENE. W.H. Houser, R.N. Hines, and E. Bresnick. Eppler Cancer Inst., Univ. of Neb. Med. Ctr., Omaha, NE 68105.

The induction of cytochrome P450c(P450c), the isozyme most closely associated with aryl hydrocarbon hydroxylase (AHH) activity in the rat, is mediated through a cytosolic polycyclic aromatic hydrocarbon (PAH) binding protein(s). We have reported on the purification and characterization of a 4S protein that interacts in a specific and saturable manner with [³H]Benzo(a)pyrene (BP) and other PAH. We have also reported on the specific and saturable interaction of the 4S protein with a plasmid containing 1.9 kbp of cloned rat P450c sequence including exon 1, the 5' half of intron 1, and 800 bp upstream information. Exonuclease footprinting methods were used to further define sequence specific binding interactions of the 4S protein with the rat P450c gene. Incubation of this protein with a portion of the rat P450c gene, followed by digestion with either lambda exonuclease or Exonuclease III, identified two protected regions 5' from exon 1. The first region is approximately -200 bp 5' from exon 1; the second is approximately -400 bp 5' from exon 1. These results corroborate previous studies which indicated that the 4S PAH binding protein interacts in a specific manner with the rat cytochrome P450c gene. We conclude that the 4S protein may play an important role in the regulation of expression of cytochrome P450c in the rat. (Supported in part by NIH grant CA36106-03 and Nebraska Dept. of Hlth. grant #86-07F).

ISOLATION AND CHARACTERIZATION OF THE HUMAN POLYCYCLIC HYDROCARBON-INDUCIBLE CYTOCHROME P-450c GENE., Hines, R.N., Heiger, W.J., Iversen, P.L. and Bresnick, E., Eppler Inst. for Cancer Res. and Dept. of Biochemistry, Univ. of Nebraska Medical Ctr., Omaha, NE 68105.

The cytochrome P-450-dependent monooxygenases (P-450) are a family of isozymes which participate in the metabolism of a variety of endogenous and exogenous compounds. Although some P-450 isozymes are expressed constitutively, others are induced to high levels of expression upon exposure of the animal to any one of a variety of xenobiotics. Polycyclic aromatic hydrocarbons are known to induce the expression of P-450c, the same isozyme which plays a critical role in the metabolic activation of these same compounds to their ultimate carcinogenic form. Utilizing a cloned fragment of the rat P-450c gene, the orthologous human gene was isolated from a normal lymphocyte genomic library. The human P-450c gene is approximately 6.1 kbp in length and contains 7 exons. The coding portions of the gene, found in exons 2-6, are 90% identical to the rat gene. Southern blot analyses of approximately 50 human individuals indicates an absence of pseudogenes, although some data suggests the presence of a human equivalent to rat P-450d. A polymorphism has been identified in about 10% of the population that consists of a duplication of portions of the human p-450c gene. The duplicated sequences includes portions of exon 2 and an unknown amount of 5' information. Studies are currently underway to further characterize this polymorphism and determine its possible significance. The expression of the gene at the level of P-450c mRNA was significantly increased in placental tissue from smoking versus non-smoking patients. Studies are in progress to ascertain which genetic elements are important in the regulation of expression of the human P-450c gene. (Supported in part by Neb. State Dept. of Hlth Grants 85-25 and 86-05R and PHS Grant ES03832.)

A STUDY OF THE MECHANISM OF VACCINIA VIRAL CORE INDUCED PROTEIN SYNTHESIS INHIBITION. Chakrabarti, D. and Gupta, N.K. Department of Chemistry, University of Nebraska, Lincoln, Nebraska 68588-0304

Animal cells contain protein synthesis inhibitors such as HRI (Heme-regulated inhibitor) which phosphorylate the α -subunit of a peptide chain initiation factor, eIF-2 and thus inhibit protein synthesis as eIF-2 α (P)-GDP (eIF-2 is isolated as eIF-2-GDP) binds to another factor GEF (Guanine nucleotide exchange factor) and forms inactive eIF-2 α (P)-GDP-GEF. A reticulocyte cell-supernatant factor RF reverses this inhibition. RF contains free unphosphorylated eIF-2 α -subunit. We have postulated that RF donates this α -subunit to eIF-2 α (P)-GDP and thus reforms active eIF-2.

We have studied the mechanism of preferential inhibition of host protein synthesis during vaccinia virus infection of animal cells. We now report: (1) vaccinia viral core which inhibits protein synthesis in reticulocyte lysates, induced limited phosphorylation of eIF-2 α -subunit and also inhibited GEF activity in reticulocyte lysate. (2) RF reversed vaccinia viral core induced protein synthesis inhibition in reticulocyte lysate. (3) In partial reaction, vaccinia viral core strongly inhibited Met-tRNA_f-40S complex formation with globin mRNA but only marginally inhibited Met-tRNA_f-40S complex formation with AUG-codon. We postulate that the viral core induces limited phosphorylation of eIF-2 and thus preferentially inhibits translation of different mRNAs. Several possible mechanisms will be discussed. (Supported by Cancer and Smoking Disease Research Program LB 506, Nebraska Department of Health and NIGMS Grant GM22079.)

TRANSPLACENTAL INDUCTION OF OVARIAN TUMORS IN RATS BY A NITROSAMINE AND THEIR INHIBITION BY A LH-RH ANALOGUE. Parviz M. Pour and Andrew V. Schalley, Eppley Institute for Research in Cancer, UNMC, Omaha, NE 68105-1065 and Veterans Hospital, Tulane University Med. School, New Orleans, LA.

Ovarian and testicular tumors were induced in the offspring (F₁-generation) of MRC rats that received single or multiple doses of N-nitrosobis(2-oxopropyl)amine (BOP) during the 14th, 18th and/or 20th days of pregnancy. The ovarian tumor incidence was significantly higher (46%) in the F₁ generation exposed to the carcinogen a single time at the 18th day of gestation, when compared to those exposed at the 14th (P < 0.005) or 20th days (P < 0.025), and was highest in those exposed to BOP repeatedly (at the 14th through 20th days of gestation). Morphologically ovarian tumors were of a mixed germ cell-coelemic type. Testicular tumors were of mixed Leydig cell-glandular types and occurred in a higher incidence in the F₁-generation exposed to BOP at the 18th or 14th through 20th day of gestation, compared with those exposed to the carcinogen at other times of the gestation period (P < 0.0005). Since morphologic findings indicated that ovarian tumors produced estrogen, in a subsequent preliminary study we treated pregnant rats at the 18th day of gestation with BOP and treated the female offspring with an analogue of LH-RH, known to inhibit sex hormone release. This treatment did not significantly change the ovarian tumor incidence but inhibited tumor growth and suppressed development of coelemic types of tumors, the most common type of human ovarian cancer. This is the first report of transplacental gonadal tumor induction by a nitrosamine. Supported by program project grant 1P01 CA25100 from the National Cancer Institute, NIH.

PROMOTING AGENTS FOR LEUKEMIA/LYMPHOMA INDUCTION IN RATS. S.S. Mirvish, D.D. Weisenburger, S.S. Joshi, J. Nickols. Eppley Inst., Res. Cancer, Univ. Neb. Med. Center, Omaha, NE 68105-1065.

Lymphoma/leukemia in agricultural areas could be induced by N-nitroso compounds acting with pesticides or immune modulators. To help test this view, groups of MRC-Wistar rats were treated chronically with 2-hydroxy-ethylnitrosourea (HENU) in drinking water for one year alone or together with methyl prednisone, Freund's adjuvant, and the pesticides 2,4,5-trichlorophenoxyacetic acid (245T) or commercial (85% pure) pentachlorophenol (PCP). Other groups included treatment with each agent alone and with butylnitrosourea (BNU), and treatment of mice with HENU and BNU. From the necropsies, HENU induced apparent leukemia/lymphoma and tumors or metastases in liver, lungs, uterus and kidneys. The pathology of these tumors will be reported in detail. In earlier studies HENU induced a high incidence of Burkitt's-like B-cell leukemia/lymphoma like those seen in farmers, whereas most nitrosoureas induce T-cell leukemia/lymphoma. The B-cell lymphoma/leukemia showed generalized lymphadenopathy and hepatosplenomegaly. Frozen-section immunohistochemical analysis of these tumors from rats and mice confirmed the B-cell origin of the tumor. The effect of the test modulators will be described.

This research was supported by a Nebraska Department of Health grant from 1984 to 1986.

INVOLVEMENT OF OXYGEN RADICALS IN NITROSAMINE ACTIVATION. Peter Gannett and Terence Lawson, Eppley Institute for Research in Cancer, UNMC, Omaha, NE 68105-1065.

Carcinogenic nitrosamines require enzymic activation, during which hydroxylated intermediates, essential to the activation, are produced. After alpha hydroxylation the nitrosamines might break down spontaneously. While this can be mediated by cytochrome P-450 dependent enzymes, there is evidence, including theoretical considerations, that other enzymes could be involved. We have data implicating prostaglandin(H)synthase (P[H])S in this hydroxylation. We examined the alkylation of DNA by (G-³H)-nitrosobis(2-oxopropyl)amine (³H)BOP activated in vitro by ram seminal vesicle P[H]S. We showed that (T) P[H]S could activate BOP, (ii) this was dependent on co-factors essential for P[H]S activity, omission of which reduced the specific activity of DNA by 80% and (iii) addition of P[H]S inhibitors produced similar reductions. N-3-Methylguanine and N-7-methylguanine were isolated from hydrolysates of alkylated DNA. This is consistent with the alkylating ability of BOP, which is a methylating agent in vivo. Hydroxyl radicals formed during P[H]S mediated co-oxygenation could be responsible for the hydroxylation, which is known to be essential for nitrosamine activation. P[H]S was replaced with a hydroxyl radical generating system (Fenton system), which also resulted in the alkylation of DNA by (³H)BOP. This action, and that of P[H]S, was inhibited by hydroxyl radical scavengers, but not by inhibitors of singlet oxygen or superoxide radicals.

This research was supported by a grant from the Nebraska Department of Health.

ISOLATION OF A HUMAN DNA REPAIR GENE BY SELECTION IN CHINESE HAMSTER OVARY CELLS. RuChuang Ding, Alan Eastman and Edward Bresnick, Eppley Institute for Research in Cancer, UNMC, Omaha, NE 68105-1065.

Alkylation of DNA at the O⁶ position of guanine represents a potent mutagenic and carcinogenic lesion. A specific DNA repair process directly removes the alkyl group in a stoichiometric (suicide) fashion. The protein involved is O⁶-alkylguanine alkyltransferase and its gene is designated mex. Resistance to chloroethylnitrosourea (CNU) is also mediated by this protein and can therefore be used to select cells into which the mex gene has been introduced. DNA purified from human liver (mex⁺) has been introduced into Chinese hamster ovary cells (mex⁻) by calcium phosphate precipitation. A marker gene, bacterial

xanthine-guanine phosphoribosyltransferase (gpt), was simultaneously co-transfected. The transformed cells were initially selected for the expression of gpt and reselected in CNU. A resistant clone of cells was isolated. DNA from these cells was retransfected into CHO^{mex} cells and gpt colonies isolated. Several transformants were also resistant to CNU demonstrating linkage of these two genes. A cosmid library was made and grown in a gpt strain of E.coli. Gpt⁺ colonies were selected, the cosmid purified, retransfected into CHO cells and gpt⁺ colonies again selected. Of 7 cosmids tested all demonstrated CNU resistance. The mex gene will be isolated from these cosmids.

Supported by NIH grant CA36679.

INTERACTIONS OF ACROLEIN WITH HOMOPOLYNUCLEOTIDES AND DEOXYNUCLEOTIDES IN VITRO. Smith, Raymond A., Pinnt, Ilene M., Williamson, Daniel S., Sysel, I. Ann, and Cohen, Samuel M., University of Nebraska Medical Center, Department of Pathology & Microbiology and the Eppler Institute for Research in Cancer, Omaha, Nebraska 68105.

Cigarette smoking and cyclophosphamide (CP) are etiologically related to human bladder cancer. Acrolein is a constituent of tobacco smoke and is also the metabolite of CP responsible for its deleterious effects on the bladder. Acrolein causes base pair substitution mutations in Salmonella TA104 in the absence of an activating system. Reaction of acrolein with homopolynucleotides results in the formation of acrolein nucleotide adducts which were detected as 5'-deoxynucleoside monophosphates by a 32p post-labeling procedure combined with four-dimensional thin layer chromatography and autoradiography. To determine the structure of the acrolein adducts, deoxynucleoside-5'-monophosphates were reacted with a 3-fold excess of acrolein. The products were purified by ion pair high performance liquid chromatography, and their structures determined by nuclear magnetic resonance and mass spectroscopy. Using these techniques, we have identified 3,N⁴-propanodeoxycytidine-5'-monophosphate, 1,N⁶-propanodeoxyadenosine-5'-monophosphate, and 1,N²-propanodeoxyguanosine-5'-monophosphate. The adducts of thymidine are being characterized. These exocyclic adducts arise through modification of sites normally involved in base pairing in the Watson-Crick model of the DNA helix and may, therefore, represent potentially miscoding elements. The formation and persistence of these adducts in DNA following acrolein exposure as well as their potential to cause miscoding are the subject of future investigations.

This research was supported in part by grant 87-01R from the Nebraska State Department of Health.

THE ALKYLATION OF DNA BY N-NITROSCARBAMATES AND THE PARENT NITROSAMINE: A CORRELATION WITH CARCINOGENICITY. Terence Lawson, Donald Nagel, Katherine Stepan, Michael Fisher and Kevin Stansbury. Eppler Institute for Research in Cancer, UNMC, Omaha, NE 68105-1065.

N-Nitrosobis(2-oxopropyl)amine (BOP) induces liver and pancreas tumors in Syrian hamsters, the tumor distribution varying with the dose. At low doses BOP is solely a pancreas carcinogen. There are comparable differences in the alkylation of liver and pancreas DNA by BOP in vivo which may account for the organotropy. BOP methylates pancreas DNA but methylates and 2-hydroxypropylates liver DNA. The ratios of alkylation at the N-7 and O-6 positions of guanine for the methyl and 2-hydroxypropyl groups were about 1:1 and 1:2, respectively. In vitro, alkylation was studied using ethyl-N-nitroso-N-(2-hydroxypropyl)carbamate (NHPC) and its 2-oxopropyl analog. The decomposition of N-nitrosocarbamates parallels the breakdown of alpha-hydroxy-nitrosamines, essential metabolites in nitrosamine activation. NHPC and NOPC were decomposed in the presence of guanine. NOPC methylated guanine whereas NHPC 2-hydroxypropylated it. The ratio of N-7 alkylation to O-6 alkylation was about 10:1 for NOPC and 1:1 for NHPC. In the V79-cell mutagenicity assay, NOPC was mutagenic, whereas NHPC was not. As this assay correlates well with the carcinogenicity of BOP and

related N-nitroso compounds, the mutagenicity data would suggest that BOP carcinogenicity depends on the DNA methylation not on 2-hydroxypropylation. However, it would be expected that the O-6-(2-hydroxypropyl)guanine would persist for longer than the O-6-methylguanine and hence be more likely to be involved in carcinogenesis. We will address this apparent anomaly.

This research was supported by a grant (CA 31016) from the National Institutes of Health.

A TRANSIENT EXPRESSION VECTOR TO STUDY DNA REPAIR IN MURINE LEUKEMIA L1210 CELLS SENSITIVE AND RESISTANT TO CIS-DIAMMINEDICHLOROPLATINUM (II). Nader Sheibani and ATan Eastman, Eppler Institute for Research in Cancer, UNMC, Omaha, NE 68105-1065.

cis-Diamminedichloroplatinum(II) (cis-DDP) has a broad clinical application as an effective anticancer drug. However, development of resistance to the cytotoxic effects is a limiting factor. In an attempt to understand the mechanism of resistance we have developed a host-activation assay of DNA repair using a cis-DDP-treated plasmid vector. The efficiency of DNA repair is assayed by measuring the activity of an enzyme coded for by the plasmid vector. The plasmid expression vector, pRSVcat contains the bacterial gene coding for chloramphenicol acetyltransferase (cat) in a configuration which permits expression in mammalian cells. The plasmid also contains pBR322 sequences allowing for replication in bacteria and for ampicillin resistance. The cat activity has been assayed in cis-DDP sensitive and resistant L1210 cells following DEAE-dextran mediated transfection with cis-DDP-treated pRSVcat. Results indicate that, in the sensitive cells, one cis-DDP adduct per cat gene was sufficient to totally inhibit expression. An equivalent inhibition of cat expression in the resistant cells did not occur unless four times the amount of damage was introduced into the plasmid. This suggests that the resistant cells have an enhanced DNA repair capacity which may contribute to the development of cellular resistance to cis-DDP.

Supported by NIH grant CA 36039.

INHIBITION OF N-METHYL-N-NITROSOUREA (MNU) INDUCED MUTAGENICITY AND DNA METHYLATION BY ELLAGIC ACID: A DNA AFFINITY BINDING MECHANISM. Rakesh Dixit and B. Gold. Eppler Institute, University of Nebraska Medical Center, Omaha, NE 68105-1065.

Ellagic acid (EA), a naturally occurring plant phenol, inhibits the activity of the direct acting mutagen N-methyl-N-nitrosourea (MNU) in *S. typhimurium* TA100. EA at concentrations of 0.10, 0.25, 0.50 and 1.00 mM inhibited the mutagenicity of MNU (0.40 mM) by 3, 13, 45 and 60%, respectively. EA (3 mM) also inhibited the mutagenic activity of N,N-dimethylnitrosamine (DMN) (25-200 mM) in the presence of pyrazole-induced rat liver S-9. The effect of EA on DNA methylation was studied by incubating 0, 0.72, 1.32, 2.64 and 6.60 mM EA with DNA (0.9 mM nucleotide) and [³H]MNU (0.66 mM). HPLC analysis of the (O-6)- and (N-7)-methylguanine (Me-G) adducts revealed that EA caused a dose-dependent 36-84% decrease in (O-6)-Me-G, while only a minor decrease in the (N-7)-Me-G adduct was observed. Under conditions where methylation at the (O-6)-position of guanine (G) in double-stranded (d-s) DNA was inhibited 65% by EA, no significant inhibition of (O-6)- or (N-7)-Me-G formation was detected in single-stranded (s-s) DNA. Using [³H]EA, affinity binding studies revealed that EA binds equally to d-s or s-s DNA. Scatchard plot analysis of the binding of EA to A-T and G-C base pairs indicate that A-T base pairs have a 4-5-fold higher affinity binding constant and increased number of binding sites as compared to G-C base pairs. EA binding to duplex DNA is inhibited (20-30%) by ethidium bromide, a DNA intercalator, but not by spermidine or distamycin A, the DNA minor groove binder. The results suggest that EA inhibition of MNU-induced mutagenicity is due to specific prevention of methylation at the O-6 position of G through an EA-duplex DNA affinity binding mechanism.

This research supported by grant NIH core grant CA36727.

POSTERS

MECHANISM(S) OF DENITRATION OF 6-NITROBENZO(a)PYRENE (6-NBaP). C. Raha and E. Bresnick, Eppey Institute for Cancer Research, 42nd and Dewey Avenue, Omaha, NE 68105-1065.

Nitrated polycyclics, including 6-NBaP, occur in our environment and many are direct-acting bacterial mutagens. Others, such as 6-NBaP, require metabolic activation by mammalian enzymes. When tested in animals 6-NBaP, unlike BaP, is a weak carcinogen. To understand this finding, we carried out the *in vitro* metabolism of 6-NBaP using 3-methylcholanthrene-induced rat liver microsomes, in the presence or absence of white light, in air, or in argon atmosphere. Metabolic products included benzo(a)-pyrene (BaP), BaP phenols and ring-hydroxylated 6-NBaP products, such as 3- (plus 1-) OH- and dihydroxylated 6-NBaP. In the dark the same products were formed and this suggested there were no photochemical reactions. In argon atmosphere more BaP and very few of the ring-oxygenated metabolites were formed. Among the latter there were mono- and di-hydroxyBaPs, in air, thereby suggesting the loss of the nitro-group. 2-(4,6-Dichloro-0-biphenyl-oxy)ethylamine (DPEA, a gift from Eli Lilly and Co.), a specific inhibitor of cytochrome P-450 enzyme(s), inhibited formation of the ring-hydroxylated metabolites, including denitration products. We suggest the following mechanisms of product formation, which may involve cytochrome P-450. 6-NBaP + O₂ + NADPH: (a) In air, ring-oxygenated plus denitration products; (b) in argon, 6-NBaP + NADPH + (NADPH cytochrome P-450 reductase) → C₂₀H₁₁NO₂ + NO₂⁻ + C₂₀H₁₁ + C₂₀H₁₂ (BaP). In the other mechanism in air, a peracid-type intermediate (G.A. Hamilton, J. Am. Chem. Soc. 64, 3391) may be formed from the enzyme (C-Terminal), which oxidizes the nitro group. C₂₀H₁₁NO₂ + R.C(=O)-O-O-H + HNO₂ + C₂₀H₁₁O'CO'R + H₂O + C₂₀H₁₁OH + R'CO₂H (enzyme). This research was supported by grant # 86-10R from the Nebraska State Department of Health.

SAVOY CABBAGE AND CARCINOGENESIS. Margaret M. Wheeler and Desmond M.S. Wheeler, Department of Chemistry, University of Nebraska, Lincoln, NE 68588-0304 and Edward Bresnick, Diane F. Birt, Terence A. Lawson, Michelle R. Tibbels and Betty A. Walker, Eppey Institute for Cancer Research, University of Nebraska Medical Center, Omaha, NE 68105-1065.

Our research is aimed at isolating from Savoy cabbage compounds which inhibit the development of cancer. Savoy cabbage grown by Mrs. B. Besal (Department of Horticulture UNL) has been exhaustively extracted with petroleum ether, methylene chloride and methanol. The crude fractions have been tested for anti-mutagenic and anti-promoter activities by 3 methods: a modified Ames test (using methylnitrosourea and 2-aminoanthracene as mutagens); the hepatocyte-V79 cocultivation test and the epidermal ornithine decarboxylase (ODC) system using tetradecanoyl phorbol acetate (TPA) as a promoter. The first two tests are markers for anti-initiating and the third for anti-promoting activity. Some of the crude fractions showed activity in at least one of the tests. Chromatography of the petroleum ether extract has led to a particularly active fraction. Further work on this material has led to the isolation of β-sitosterol (shown by other groups to have anti-promoting activity) and a green mixture which appears to be largely pheophytin A. These compounds do not account for all of the anti-mutagenic or anti-promoting activity of the cabbage extracts. This research is supported by grant 5R01 CA38150.

LUNG CANCER IN A YOUNG MARIJUANA SMOKER

Cotterell, LW., Mailliard, JA.

Creighton Cancer Center
Creighton University
Omaha, Nebraska 68131

A 26 year old male presented in October 1985 with complaints of hemoptysis and malaise. His history was significant for marijuana smoking, averaging at least four marijuana cigarettes-per day for approximately thirteen years. He also smoked tobacco cigarettes during that time, one pack-per-day for two years, but quit four years prior to admission. Chest roentgenogram revealed a left lower lobe infiltrate. Bronchial biopsy disclosed a poorly differentiated adenocarcinoma. Serum beta human chorionic gonadotropin and alpha-fetoprotein were normal.

There were no clinical features suggestive of extragonadal germ cell cancer syndrome. To our knowledge there have been no reports of lung cancer associated with marijuana smoking. Review of the literature shows that smoking marijuana has the potential for lung damage similar to that of tobacco smoking. Marijuana may be implicated in the etiology of lung cancer as its use continues among the young.

THE ROLE OF THIOL GROUPS IN RENDERING trans-DIAMMINEDICHLOROPLATINUM(II) INEFFECTIVE AS AN ANTI-CANCER DRUG. Alan Eastman, Eppey Institute for Research in Cancer, UNMC, Omaha, NE 68105-1065.

In attempting to understand the mechanism of action of the effective anti-cancer drug *cis*-diamminedichloroplatinum(II) (*cis*-DDP), much emphasis has been placed on the ineffective isomer, *trans*-DDP. The difference in effectiveness is thought to relate to different adducts produced in DNA. These adducts have been characterized for both drugs. *cis*-DDP platinated the following sequences in DNA: GG, 65%; AG, 25%; GNG, 6%. Monofunctional platination occurred at short time periods. These adducts could be trapped with thiourea. Post-incubation after removal of drug led to rearrangement to bifunctional adducts within 2 hours. The incubation of *trans*-DDP with DNA produced bifunctional adducts between two deoxyguanosines or between deoxyguanosine and deoxycytidine. These structures have been confirmed by ¹H-NMR and mass spectrometry. However, the largest proportion of adducts were monofunctional and took 24 hours to significantly rearrange to bifunctional adducts. Thiourea could not be used to trap monofunctional adducts because this *trans*-labilized the base. This suggested a potential role *in vivo* for sulfhydryl groups such as on glutathione. Monofunctional DNA adducts produced by *cis*-DDP can react with glutathione to produce stable cross-links. However, equivalent cross-links with *trans*-DDP are unstable and dissociated from DNA. This may represent a passive DNA repair mechanism. This hypothesis was further tested by reducing the glutathione concentration in cells using buthionine sulfoximine. This resulted in a marked sensitization to *trans*-DDP but not *cis*-DDP thereby confirming the role of thiols in rendering *trans*-DDP ineffective as an anti-cancer drug. Supported by NIH grant CA36039.

Control of Co-eIF-2A Gene Expression and Protein Synthesis. D. Chakrabarti, M.K. Nag and N.K. Gupta. Department of Chemistry, University of Nebraska, Lincoln, NE 68588-0304

The first step in peptide chain initiation is the formation of a ternary complex between peptide chain initiation factor 2 (eIF-2), Met-tRNA, and GTP. Met-tRNA_{Met}·eIF-2·GTP. Different eukaryotic mRNAs degrade this ternary complex and the efficiencies of such degradation varies with different mRNAs. A protein factor which we term Co-eIF-2A stabilizes the complex to mRNA as it becomes physically bound to the ternary complex. This Co-eIF-2A activity is also essential for Met-tRNA_{Met}·40S ribosome preinitiation complex formation with physiological mRNAs. We wish to explore the possibility that Co-eIF-2A level inside the cell may play a critical role in mRNA selection during translation as different concentrations of this factor may be required to form stable ternary complex in the presence of different mRNAs. With this objective we have initiated research to clone Co-eIF-2A gene and study its role in regulation of translation of specific mRNAs including oncogene RNAs. In this research, we have isolated several λ gt11 clones secreting Co-eIF-2A polypeptide sequences by screening a human liver cDNA library constructed in λ gt11 using Co-eIF-2A antibodies. One of the clones has yielded a 1.5 kilobase pair insert after E co RI digestion of the λ DNA. This insert DNA sequence has been further cloned in a pUC8 vector and has been amplified. We are presently trying to use this insert DNA to isolate Co-eIF-2A mRNA from Friend erythroleukemia cell using the hybrid selection technique. (Supported by Cancer and Smoking Disease Research Program, L8 506, Nebraska Department of Health.)

HEMATOPOIETIC STROMAL:STEM CELL INTERRELATIONSHIPS IN EXPERIMENTAL BONE MARROW TRANSPLANTATION. Crouse, D.A., Udeaja, G.C., Mann, S.L. & Sharp, J.G., Depts. of Anatomy and Radiology, Univ. Neb. Med. Ctr., Omaha, NE 68105.

Bone marrow transplantation is now an accepted treatment for many hematopoietic and non-hematopoietic malignancies as well as certain other congenital and acquired diseases. It typically involves the intravenous infusion of bone marrow derived and/or circulating hematopoietic stem cells (HSC) into an autologous or allogeneic recipient prepared by chemoradiotherapy. Clearly, such a protocol disrupts the normal architecture and cellular interrelationships in both the recipient and the donor marrow. There is increasing evidence that intimate cell contacts between HSC and their stroma are necessary for proper regulation of the more primitive members of the HSC population. In the studies reported here, we have employed a mouse model combined with the techniques of long term bone marrow culture, organ culture reaggregation, spleen colony assays and quantitative morphometry to evaluate the quality of hematopoietic reconstitution attained when HSC and stromal cells were administered intravenously as a suspension compared to organ cultures derived from the same suspension and grafted beneath the kidney capsule. In these experiments we have shown that: i) bone marrow derived HSC and stromal cells initially dispersed as a cell suspension and cultured in a monolayer can be reaggregated into a hematopoietic organ culture *in vitro*; ii) grafting of such organ cultures, containing stromal cells and primitive HSC to an irradiated syngeneic recipient, results in vigorous hematopoiesis in the ectopic graft site whereas transplantation to an unirradiated recipient results in a largely stromal graft; iii) the quality of reconstitution, based on D12 vs D8 spleen colonies is enhanced by ectopic organ culture grafting compared to intravenous infusion. Supported by Nebraska Department of Health (LB506) Funds.

PREMATURE DEATH DUE TO CANCER: ALTERNATIVE MORTALITY MEASURES. Friman, P. C., Finney, J. W., & Leibowitz, J. M., Meyer Children's Rehabilitation Institute and The Johns Hopkins University School of Medicine. A variety of mortality indexes are needed to measure the impact of health problems. Conventional mortality indexes, which are based on total death rates, emphasize diseases which are common causes of death in the elderly. Some diseases that have a low incidence of deaths, however, may account for a large number of premature deaths. A mortality index that accounts for premature deaths can provide useful information for determining health services and medical research priorities for the nation. The Potentially Productive Years of Life Lost (PPYLL) was introduced by Morbidity and Mortality Weekly Report in 1982 as a means of gauging the impact various causes of death have on premature deaths. The PPYLL statistic for a given time period equals the sum of deaths in each of 14 age-at-death categories (e.g., 0-1, 1-5, 6-10, 11-15,...) multiplied by the sum of the difference between the midpoint of each category and 65 years of age. A second calculation (not yet reported in the literature) can be made using the PPYLL statistic to indicate the average years of life lost per death (PPYLL/D). We used PPYLL and PPYLL/D measures to analyze a 10-year (1974-1983) sample of National Center for Health Statistics mortality data for the ten leading causes of cancer death in men. We also calculated annual death rates and 5-year survival rates for each cancer. The results suggest that cancers with high population death rates tend to have high PPYLL, low 5 year survival rate, and a low PPYLL/D (e.g., lung cancer) and cancers with low population death rates tend to have low PPYLL, high 5 year survival rates, and high PPYLL/D (e.g., testicular cancer). This research was supported MCH Grant Project # 405.

COMBINED THERAPY FOR RESECTABLE STAGE III NON OAT CELL CARCINOMA OF THE LUNG: TEN YEAR EXPERIENCES. Mario Albertucci, M.D., Tom R. DeMeester, M.D.

Fifty-three patients with resectable Stage III non oat cell carcinoma of the lung were prospectively treated with radiation, resection and 12 months of combination chemotherapy (CAMP). All patients had complete mediastinal lymphadenectomy: treatment related mortality was 8%. Patients were followed until death or for a minimum of 5 years. Survival according to classification was

Classification	No. Patients	No. Alive 5 Yrs	% Alive 5 Yrs
T ₁ or T ₂ N ₁ M ₀	18	1	6%
T ₁ N ₀ M ₀	13	4	31%*
T ₃ N ₀ M ₀	9	2	22%
T ₃ N ₁ M ₀	13	0	0%
T ₃ 2M ₀	53	7	12.5%

*Differs from other classification except T₃N₁M₀ p>.05. Twenty-nine patients died with distant metastasis and 5 with local tumor recurrences. Patients with T₃N₀ disease had a lower incidence of metastatic disease than patients with lymph nodes (N₁ and N₂) involvement (p<0.001), however, local recurrences were more common than in patients with more advanced classification (p< 0.01). Six patients are currently alive between 5 and 10 years after treatment: 3 received a complete course of chemotherapy, one refused initially and 2 after the 3rd and 9th cycle. We conclude that: combined treatment does not increase the 5 year survival over that reported for surgery alone. T₃N₀ tumors are locally invasive and potentially curable tumors. The 5 year survival of these patients is at variance with the other classification of Stage III and similar to that reported for Stage II disease. Patients with N₁ disease are affected with aggressive but still curable tumors. Treatment does not change the natural history of favorable N₂ lesions. Patients with T₃N₀ tumors should not be considered for surgery. This research supported by a grant from the Creighton University Department of Surgery.

THE MOLECULAR BIOLOGY OF CELL SENESCENCE. J. A. Weaver and S.L. Rhode.

Cell immortalization may be an obligatory step in a pathway leading to transformation. Our hypothesis is that expression of certain, specific DNA sequences, when expressed in an anti-sense orientation, may function in control of cell immortalization. The object of the present study is to identify DNA sequences which may control senescence and to determine the proteins specified by these sequences as well as their role in cell transformation. In order to obtain cellular DNA sequences which function in senescence, clones of immortalized rat fibroblasts were isolated after treatment with the retrovirus vector (SVX) which acts as an insertional mutagen. The proviruses, flanked by cellular DNA sequences were rescued from a set of immortalized clones after which cellular DNA was subcloned into the D ϕ I retrovirus vector. Both sense and anti-sense clones will be tested for function by infection of normal human fibroblasts and testing for an anti-senescence phenotype. Because the insertional mutagenesis method is complicated by a background of spontaneous immortalization of rat cells, a more direct approach is in progress. For these experiments a cDNA anti-sense library from senescent human cells is being constructed in the D ϕ I expression vector and will be rescreened for activity in normal human fibroblasts. Fibroblasts with a prolonged life span will have the shuttle vector rescued for characterization of the senescence (sen) gene. This research supported by State of Nebraska grant #86-43.

CORRELATION OF IN VITRO CULTURED AND IN VIVO SELECTED CLONES IN ACUTE LYMPHOBLASTIC LEUKEMIA. Joshi¹ S.S., Glenn² L., Vaughan³ W.P., Stevenson⁴ M., Sanger⁵ W., Sharp⁶ J.G. and Weisenburger⁷ D.D., Depts. of Pathology & Microbiology¹, Internal Medicine², Pediatrics³ and Anatomy⁴, Univ. Nebr. Med. Ctr., Omaha NE 68105.

An in vitro culture system was used to selectively culture malignant cells from the bone marrow specimen of a patient with acute T-lymphoblastic leukemia. Molecular analysis of the DNA extracted from the bone marrow cells before culture showed the presence of both rearranged and germ line patterns for the T-cell receptor (CT β) gene, and cytogenetic analysis revealed the presence of two distinct chromosomally abnormal clones in the malignant cells. The cells were cultured in RPMI medium supplemented with 20% fetal calf serum, 2% lymphocyte conditioned medium, L-glutamine and antibiotics. The presence of malignant cells in the cultured population was confirmed by morphology, molecular probing, cytogenetic analysis and flow cytometry for cell surface markers. After four weeks in culture, DNA extracted from the cultured cells showed only the rearranged pattern for the CT β receptor gene. Cytogenetic analysis of the same sample revealed the presence of a predominant abnormal clone in the cultured cells. Interestingly, when we then analysed fresh uncultured bone marrow cells from the patient, the same abnormal clone predominated in the in vivo specimen also. Thus, our results demonstrate the selective nature of our culture system and its ability to amplify malignant lymphoblasts in the human marrow. This culture system is useful for detecting occult malignant cells in histologically normal bone marrow. It may also have prognostic value and thus influence the selection of treatment modalities. (Supported by Nebraska State Department of Health LB506 funds)

EFFECT OF EXOGENOUS TESTOSTERONE ON PROSTATIC CARCINOGENESIS.

Parviz M. Pour, Kathy Stepan and Kim Carlson, Eppler Institute and Department of Pathology and Microbiology, UNMC, Omaha, NE 68105-1065.

A low incidence of prostatic carcinomas was induced in rats by prolonged administration of N-nitrosobis(2-oxopropyl)amine (BOP). However, contrary to the situation with human prostatic cancer, which is of a glandular type, the most induced tumors were of a squamous cell type. Since testosterone (T) has been implicated in the etiology of human prostatic cancer, we examined the effect of exogenous T in prostatic carcinogenesis in our model and treated rats with different doses of BOP and with or without T for various periods. Serum T and estradiol (E) were determined at the end of the experiment (72 weeks) and the induced prostatic lesions were examined morphologically and immunohistologically. The results showed that: 1) Administration of T after BOP did not alter the tumor yield, regardless of the duration of carcinogen treatment. 2) In rats treated with T and BOP simultaneously for 3 and 5 days, respectively, a high incidence of prostatic cancer was induced and most of the neoplasms were adenocarcinomas, similar to those seen in man. 3) In rats treated with BOP and T simultaneously and given T for life, a considerably larger number of prostatic carcinomas developed. 4) T alone induced a few prostatic adenocarcinomas. 5) Prolonged administration of T caused a significant elevation of the serum E level. 6) All induced prostatic tumor cells reacted with both T and E antibodies. The results of this study allow us to conclude that T plays a role in the initiation of prostatic carcinogenesis, whereas E should be considered a promoter and that interactions between T and E may be involved in prostatic carcinogenesis. Supported by grant R01 CA34473 from the National Cancer Institute, NIH.

"ANALYSIS OF THE INTERACTION OF EPSTEIN-BARR VIRUS WITH NORMAL EPITHELIAL CELLS, USING SENDAI VIRUS-MEDIATED DNA TRANSFER AND RECEPTOR TRANSPLANTATION", Sinangil, F., Wu, Y.T. and Volsky, D.J., Dept. of Pathology & Microbiology, University of Nebraska Medical Center, Omaha, Nebraska, 68105

Primary cultures of epithelial cells were grown from tonsils of patients with diseases not related to Epstein-Barr Virus (EBV). The cells were implanted with EBV receptors and exposed to EBV of the transforming and non-transforming strains. The EBV-infected and control cells were pulsed with (³⁵S)-methionine at 18-24 hours after infection, immunoprecipitated with anti-EBV sera and analyzed by SDS-gel electrophoresis. About 20 EBV-determined proteins, ranging from 22 kilodaltons to 185 kilodaltons were detected in nontransforming virus infected epithelial cells. Attempts were also made to transform primary epithelial cell cultures by using Sendai virus-mediated DNA transfer and receptor transplantation. 5-7 weeks after transfection with Cosmid cocktail of EBV genome, piling up and rounding of cells and foci formation was observed. Mechanism of EBV-epithelial cell interactions will be further studied, using molecular biological techniques.

This research supported by grant LB-506, 87-09R.

ENDOGENOUS MURINE LEUKEMIA VIRUS PROVIRAL INTEGRATION SITES IN MOUSE SKIN TUMORS. Pelling, J., Strawhecker, J., Johnson, J., and Nairn, R. Eppley Institute for Cancer Research, and Dept. of Biochemistry, Univ. Neb. Med. Ctr., Omaha, NE 68106-1065 and Univ. Texas System Cancer Ctr., Smithville, TX.

DNA copies of RNA tumor viruses (retroviruses) are integrated in proviral form into the host cellular DNA of most, if not all, vertebrates. These endogenous retroviral DNA sequences have been shown to undergo recombination and re-integration at new genomic sites during spontaneous lymphomagenesis in mice. We have investigated patterns of Murine leukemia virus (MuLV) integration sites in cellular DNA of skin tumors induced in SENCAR mice by initiation with dimethylbenz(a)anthracene followed by phorbol ester tumor promotion. DNA was purified from normal epidermis and from tumors, digested with BamHI endonuclease, and hybridized by Southern blotting with a 1.7 kb gp70 cDNA probe specific for the 3' end of the MuLV genome. We observed new 5.0 kb and 2.2 kb DNA bands in approximately 50% of the tumor DNAs. These bands were absent in normal epidermis. Re-hybridization with a p15E cDNA probe specific for both ecotropic MuLV sequences and mink cell focus-forming (MCF) recombinant viruses detected an altered DNA banding pattern in the same tumors possessing the 5.0 kb and 2.2 kb fragments described above. These results suggest that 1) new ecotropic viral integration sites have been generated in the tumors, or 2) a recombinant virus possessing MCF-like viral sequences has been produced and has re-integrated into new genomic sites. Experiments are underway to differentiate between these two mechanisms.

Supported by LB506 Grant 86-39.

THE METABOLISM OF CAPSAICIN: A PUTATIVE CARCINOGEN DERIVED FROM RED PEPPER. Terence Lawson, Jody Sharp and Peter Gannett, Eppley Institute for Research in Cancer, UNMC, Omaha, NE 68105-1065.

Capsaicin (8-methyl-N-vanillyl-6-nonenamide) (C), an active principal of the red pepper *Capsicum frutescens*, is believed to cause many of the responses observed on ingesting pepper. There are several homologues of C, the foremost of which is dihydrocapsaicin (8-methyl-N-vanillyl-nonanamide) (DC). Crude mixtures of capsaicinoids contain C, DC and other homologues. The ratio of C to DC influences some of the biological effects of capsaicin mixtures, such as toxicity and mutagenicity. There were quantitative differences in the hydroxylation of C and DC by the Fenton system, a non-enzymic system, which generates hydroxyl radicals. This represents differences in the chemical reactivity of C and DC and may explain the biological activity of mixtures of C and DC of different compositions. Prior to these experiments we postulated that the first reaction in the metabolism of capsaicinoids would be hydroxylation. The likely product would be an N-(4,5-dihydroxyl-3-methoxybenzyl)acylamide. We have synthesized this from C and will use it in further metabolic studies. Preliminary data on C and DC metabolism shows that they are oxidized by prostaglandin-(H)synthase, the Fenton system and peroxidic acid, but less readily by cytochrome P-450 dependent enzymes. Some data suggests that C binds to cytochrome P-450 proteins, inhibiting their further action. The nature(s) of these metabolic products are yet to be determined. There is also evidence that C and DC can be demethylated, presumably from the 3-methoxy group on the vanillyl moiety. These issues will be discussed in the light of the biological effects of capsaicinoids.

This research was supported by a grant from the National Cancer Institute (CA37945).

SYSTEMIC CANCER AND THE FAMILIAL ATYPICAL MULTIPLE MOLE MELANOMA (FAMMM) SYNDROME. Fusaro, Ramon, Dept. Internal Medicine (Dermatology), Univ. of Nebraska Medical Center & Dept. Dermatology, Creighton Univ. School of Medicine; Lynch, Henry, Dept. of Preventive Medicine, Creighton Univ. School of Medicine.

A group of patients who had atypical nevi (dysplastic) were identified in clinics of University of Nebraska Medical Center and Creighton University St. Joseph Hospital. Their clinical diagnosis was verified histologically. An in-depth genetic investigation of each proband's pedigree was initiated using a modified nuclear pedigree (all first degree relatives plus maternal and paternal grandparents, aunts and uncles). The presence of any systemic cancer of all anatomic sites and malignant melanoma in these family members was investigated by contacting each member of the pedigree. All data both positive and negative for systemic cancer were verified by examining both inpatient and outpatient medical records, including reviewing pathology reports, autopsies and death certificates. At present there are two conflicting positions with regard to the occurrence of systemic cancers of all anatomic sites in pedigree members of FAMMM patients. Our position is that there is an increased incidence of malignant melanoma and intra-ocular melanoma along with systemic cancers of the respiratory tract, gastrointestinal tract, lymphoreticular system and breast. Our investigation will present data to confirm or reject that hypothesis.

This research supported by grant #B7-16.

FAMILIAL POLYPOSIS COLI AND NEUROFIBROMATOSIS IN THE SAME PATIENT: A FAMILY STUDY. Lynch H, Fitzgibbons R Jr, Lanspa S, Marcus J, Shea P, Lynch J, Kopelovich L, Departments of Preventive Medicine, Surgery, Medicine (Gastroenterology), and Pathology, Creighton University School of Medicine, Omaha, NE 68178 and Department of Cellular and Molecular Biology, University of South Florida and Department of Cancer Genetics and Cancer Prevention, VA Medical Center, Bay Pines, FL 33504.

Familial polyposis coli (FPC) and von Recklinghausen's neurofibromatosis (NF) are relatively common, heritable, autosomal dominant precancerous disorders. Each is readily recognizable by their clinical signs. We have studied a kindred in which a patient manifested both FPC and NF. FPC was inherited through his father and NF through his mother. This is the first such occurrence of which we are aware of a patient with both FPC and NF. Given a conservative estimate, about 5% of all cancer results from single gene determined syndromes, of which about 70% are autosomal dominantly inherited. However, because of a lack of premonitory signs, it is likely that some unknown fraction of at risk and/or cancer affected patients may have inherited two or more cancer-prone genes. Several questions immediately emerge relevant to this and other patients with two or more major cancer-prone genes, and their potential for interaction. For example, will the tumor spectrum be altered as a result of differing transformation susceptibilities of distinct cell types in the body through the interaction of two distinct cancer-prone genes? Will such patients respond differently to carcinogenic agents in the environment? Priority attention should be given to this phenomenon, both clinically and in the laboratory, for elucidation of etiology and carcinogenesis.

TUMOR CELL QUANTITATIVE DNA ANALYSIS AT THE CREIGHTON FLOW CYTOMETRY LABORATORY. Marcus JN, Anderson EA and O'Kane-Murphy B, Department of Pathology, Creighton University School of Medicine, Omaha, NE 68178.

The Creighton Flow Cytometry Laboratory, established in 1985 as a joint venture of Creighton University, Boys Town National Institute and Saint Joseph Hospital under a grant from Health Futures Foundation, Inc., features a Coulter EPICS 541 flow cytometer (FC) and computer peripherals capable of simultaneous 5 parameter analysis and individual cell sorting. Human solid tumor cell cycle DNA analysis is a major research and clinical emphasis in this new laboratory. Cells are mechanically scraped from the cut surfaces of fresh tumors into medium, trypsin and RNAase digested, and stained with the fluorescent DNA dye, propidium iodide. The nuclear suspension is then run through the FC, and after several seconds, a fluorescence intensity histogram of 10,000 cells is accumulated spanning 256 or 1024 channels. From the data tumor cell ploidy is ascertained (via DNA index $DI = \text{tumor cell channel peak} / \text{diploid cell channel peak}$), along with S phase fraction ($SFF = S / (G_0 + G_1 + S + G_2 + M)$) and proliferative index ($PI = (S + G_2 + M) / (G_0 + G_1 + S + G_2 + M)$). In developing methods, particular emphasis has been placed on the crucial issues of cell extraction, storage, processing, and quality control. Modifying methods, we now routinely recover large numbers of cells with minimal enzyme treatment from fresh tumors, frozen solid (non-dispersed) tumors, frozen dispersed tumor cell suspensions, and cytology specimens (effusions, fine needle aspirates). With a burgeoning literature indicating correlation of aneuploidy to disease-free interval and survival in major cancers including breast, colon and ovary, it is anticipated that FC DNA analysis will have wide clinical application. The Creighton facility is available for clinical consultations and collaborative and consultative research projects.

ANALOGS OF 9-DEAZAADENOSINE AS INHIBITORS OF POLYAMINE BIOSYNTHESIS AND CELL PROLIFERATION. Pankaskie, Marvin C., College of Pharmacy, University of Nebraska Medical Center, Omaha, Nebraska and Eloranta, Terho A., Department of Biochemistry, University of Kuopio, Kuopio, Finland.

The C-nucleoside 9-deazaadenosine, in which the normal glycosidic bond between the ribose and purine rings of adenosine is replaced by a stable carbon-carbon linkage, represents a relatively new class of nucleoside with potential anti-proliferative and anti-viral activity. In the present study, we have incorporated the structural features of 9-deazaadenosine into naturally occurring nucleosides known to have profound effects on polyamine accumulation (putrescine, spermidine, and spermine) and cellular growth, namely the 5'-chloro, the 5'-methylthio, the 5'-deoxy, and the 5'-homocysteinyl derivatives of adenosine.

All four analogs display significant inhibitory activity against the polyamine transferases (spermidine and spermine synthases) and the nucleoside salvage enzyme methylthioadenosine phosphorylase, both of which are known to control intracellular polyamine accumulation during periods of tumor proliferation, yet remain dormant during normal cell growth. This *in vitro* activity may likely explain the selective antiproliferative activity of the above analogs in tumor cell lines deficient in one or more of the above regulatory enzymes.

This research is supported by Nebraska Department of Health Grant 86-37.

President's Page

BENEFITS OF NEBRASKA MEDICAL ASSOCIATION MEMBERSHIP PAST, PRESENT AND FUTURE

We have 2,100 physicians in active practice in Nebraska. Of the total number in active practice, only 71% (1,491) have chosen to become members of the Nebraska Medical Association. Too frequently, we hear non-members ask, "What does the Nebraska Medical Association do for me?" Every physician who establishes a practice in Nebraska receives a brochure from the Nebraska Medical Association describing the Association and the benefits derived by membership in the Association.

I would suggest that in addition to the present benefits available through membership, that any member should properly respond by also pointing out benefits gained through past activities of the Nebraska Medical Association. An outstanding example is the favorable position that Nebraska physicians have in the availability and cost of medical liability insurance. During the Malpractice Crisis of 1975, this was not the case. At that time, a small group of very dedicated members of the leadership of our organization devoted an exceptional amount of time and effort, working with and achieving the cooperation of our state legislators to successfully pass legislation (L.B. 434) with tort reforms to ease the crisis at that time. An assessment of all members of the Nebraska Medical Association was required to cover the necessary expenses. A subsequent assessment has been made to cover expenses associated with refinements of the bill. With implementation of L.B. 434 in 1976, and since that time, Nebraska physicians and their patients have saved many millions of dollars that would otherwise have been spent for medical liability insurance.



Hiram R. Walker, M.D.

There are physicians in other states who must pay up to \$178,000 per year (Dade County in Florida) for liability insurance coverage to practice Obstetrics and Gynecology. The savings in just the malpractice premium each year, for Nebraska physicians, would pay their Nebraska Medical Association dues for several years. The comparatively lower cost of medical liability insurance for Nebraska physicians benefits non-members as well as members of our Association.

I have always been impressed with the inherent fairness and responsibility of physicians with whom I have come in contact over the years. I feel that if we can get our message across to our fellow non-member physicians — that the Nebraska Medical Association has been, is, and will continue working for all Nebraska physicians, that we will continue to see an increase in our membership. We need all Nebraska physicians to be members of our Association, and they need us.

Hiram R. Walker, M.D.
President



The Auxiliary

AMA-ERF

The American Medical Education Foundation and Research Fund (AMA-ERF) was established over 35 years ago to help support quality education in the nation's medical schools. From modest beginnings in 1950, the Foundation has distributed a total of over \$40 million in gifts to medical schools; guaranteed over \$95 million in loans benefiting more than 40,000 medical students, interns, and residents; and supported numerous research projects. (What it does **Not** do is provide funds to recruit candidates for medical schools.)

The American Medical Education Foundation (AMEF) was established by the AMA Board of Trustees in December 1950 to contribute to the support of medical education. At the first meeting of the AMEF Board of Directors the following spring, it was decided to distribute gifts to medical schools through the National Fund for Medical Education (NFME), which at that time was headed by former President Herbert Hoover.

In September, 1957 AMRF was founded to encourage gifts to medical research. AMEF and AMRF merged in 1962 to become the American Medical Association-Education Research Foundation.

In 1953, AMA Auxiliary was called on for assistance. An effective solicitation effort addressed to individual physicians was needed if AMEF was to become viable.

How can you help? There are many ways you can make your tax deductible contribution:

- 1.) Four times a year the Foundation solicits contributions from physicians.
- 2.) Other direct contributions are those sent to the Foundation in Chicago accompanied by a request to be credited to a specific state auxiliary.
- 3.) A special and thoughtful way for medical society and auxiliary members to mark the passing of a colleague, friend, or family member is the Memorial Card.
- 4.) There is also a way for medical society

members to remember colleagues for professional courtesies. The AMA Auxiliary has had a card designed for just such occasions — the Physician Courtesy Card.

Proper designation of funds contributed is very important. Some points to remember:

- 1.) Medical school contributions should not be designated for special projects. These funds are provided without restriction.
- 2.) If one person contributes to several schools or student assistance funds, the amount **each** school of fund is to receive must be specified.
- 3.) Be sure to specify the medical school by name, not initials.
- 4.) Medical Student Assistance Fund contributors may **Not** designate a specific medical student to receive the contribution — only a specific school.
- 5.) If no medical school is designated for a contribution, the contribution will be divided equally among all U.S. medical schools at year's end.

AMA-ERF NEEDS OUR SUPPORT. Can you afford a contribution? Can you afford not to make one.

Mrs. Frank P. Stone,
NMAA-AMA-ERF Chairman

NEBRASKA MEDICAL FOUNDATION

The Nebraska Medical Foundation was established and incorporated in 1948 by the Nebraska Medical Association as a non-profit and charitable organization. The Foundation is governed by a Board of Directors and funded through contributions, gifts from foundations, industry and other sources with the main contributions coming from Physicians and their spouses.

The purpose of the Foundation is to financially help medical students, interns and residents, as well as students in allied medical fields; the Student Loan Plan. The largest per

cent of the moneys is in this plan which enables students who would otherwise financially be unable to pursue their medical education. Pay back from students after completion of their education is almost one hundred per cent. Funds for research are given to recognized individuals and institutions; the Research Program. Scholarships of two thousand dollars are awarded annually to one undergraduate medical student from each of the two medical colleges, the University of Nebraska College of Medicine and the Creighton University School of Medicine; the Student Research Scholarship Program initiated in 1977. Scholarships are awarded during the Annual Nebraska Medical Association Convention. Distribution of money is half during the first semester and half on completion of the approved project. A recent Educational Project provided the initial fifteen thousand dollars to establish a statewide Voluntary Tumor Registry Program and has continued in this effort. The State of Nebraska has now enacted Tumor Registry into law and the State Health Department is conferring with the Foundation on implementation.

In 1958, the Auxiliary was asked to assist in promoting the objectives of the Foundation

and since then has provided leadership in securing contributions. County Auxiliaries throughout the state are actively involved in fund raising projects and efforts each year. All auxiliaries contributing are recognized at the State Auxiliary Convention, with awards from the Foundation going to the auxiliary contributing the largest total amount and the auxiliary contributing the most per capita. We feel all amounts, small, large or in between make a difference.

The Foundation since it's inception by the Association has continued to expand and grow, doing its part to improve the health and well-being of Nebraskans. As a Physician giving through a local Society, a spouse backing local auxiliary efforts, or as an individual contributor, when our common goal is to help improve the health and quality of life for all people we can support the Foundation in its role in helping to accomplish this. When contributing directly to the Foundation as an individual if you want creditation to go to a local society or auxiliary, mark it on your donation. Thank you.

Sally Becker, Auxiliary Chairman
Nebraska Medical Foundation, Inc.
1512 First National Bank Bldg.
Lincoln, Nebraska 68508

Welcome New Members

Michael J. Sullivan, M.D.
1405 - 5th St.
Aurora, NE 68818

Dan P. Warlick, M.D.
916 W. 10th
Alliance, NE 69301

Ramon R. Salumbides, M.D.
3000 - 2nd Ave.
Kearney, NE 68847

Mark J. Diercks, M.D.
9140 W. Dodge Rd., #217
Omaha, NE 68114

Werner J. Mendel, M.D.
Hastings Regional Center
Hastings, NE 68901

Benjamin J. Martin, M.D.
215 W. 2nd
Wayne, NE 68787

Kenneth K. Pavlik M.D.
110 W. 3rd Ave.
Verdigre, NE 68783

David D. Hult, M.D.
902 - 20th
Gothenburg, NE 69138

Jeffery R. Hollis M.D. (reinstated)
Geneva, NE 68361

In Memoriam

*By medicine life may be prolong'd
yet death*

Will seize the doctor too.

—Shakespeare

Fred Nebe, M.D. — (Born in 1916 - died November 20, 1986) — Medical Specialty - Internal Medicine. Doctor Nebe was a graduate of the University of Nebraska College of Medicine and practiced in Omaha and Lincoln. He was a member of the Nebraska Medical Association and the American Medical Association. Doctor Nebe is survived by his sister, Mrs. Louise Anderson of Lincoln.

Walter C. Harvey, Sr., M.D. — (Born November 29, 1891 - died November 11, 1986) — Medical Specialty - General practice. Doctor Harvey was a graduate of the University of Nebraska College of Medicine in 1920 and had his general practice in Gering, Nebraska. He was a member of the Nebraska Medical Association and the American Medical Association. Doctor Har-

vey is survived by his daughters, Mrs. Betty Jones of Harrisburg and Mrs. Gertrude Greene of Elwood; sons, Doctor Walter, Jr. of Gering, Boyden of Santa Ana, CA, and Doctor Arthur of Minneapolis, MN; brother, Jr. Milton of Sioux Falls, SD; 20 grandchildren and 17 great-grandchildren.

Walter J. Holden, M.D. — (Born July 16, 1909 - died November 28, 1986) — Medical Specialty - Obstetrics & Gynecology. Doctor Holden was a graduate of Creighton University School of Medicine in 1933 and practiced in Omaha. He is survived by two step-daughters, Marcy Echternacht, Denver, and Carol Rea, Omaha; seven stepsons, Joe Rea, Ralston, Mike Rea, Seattle, John Rea, Denver, Rob Rea, Lincoln, Paul Rea, Tom Rea and Dan Rea, all Omaha; and seven grandchildren.

Coming Meetings

UNIVERSITY OF NEBRASKA MEDICAL CENTER

7TH ANNUAL MEDICAL SKI CONFERENCE — "Diagnostic Dilemmas: The Approach and the Answers" — February 15-19, 1987 at the Keystone Conference Center, Keystone, CO. Sponsored by the Department of Internal Medicine, University of Nebraska College of Medicine. 16 credit hours in Category I of the Physician's Recognition Award of the American Medical Association.

36TH ANNUAL OB-GYN CONFERENCE — March 12-13, 1987 at the Holiday Inn Central, Omaha, Nebraska. Fee: TBA. Contact Marge Adey, University of Nebraska Medical Center, Center for Continuing Education, Omaha, Nebraska 68105. (402) 559-4152.

FAMILY PRACTICE REVIEW — A COMPREHENSIVE UPDATE — March 30-April 10, and April 27-May 8, 1987 at the Center for Continuing Education, UNMC, Omaha, Nebraska. Sponsored by the Department of Family Practice, UNMC. The fee to attend this 100 credit hour AMA Category I and AAFP Prescribed Program is \$850. (one week or split week registrations are available with special arrangements).

UPDATE ON GENERAL PEDIATRICS — June 28-July 2, 1987 at Jackson Hole Racquet Club, Jackson, WY. Sponsored by the Department of Pediatrics, UNMC.

SPORTS MEDICINE UPDATE 1987 — July 5-9, 1987 at the Jackson Hole Racquet Club, Jackson, WY. Sponsored by the Department of Orthopaedic Surgery and Rehabilitation, UNMC.

CARDIOVASCULAR DISEASE PREVENTION IN THE YOUNG AND THE ADULT — August 2-5, 1987 at the Snowmass Club, Snowmass, Colorado. Sponsored by UNMC.

EMERGENCY MEDICINE REVIEW — September 21-26, and October 5-10, 1987

at the Center for Continuing Education, UNMC, Omaha, NE 45 hours of ACEP Category I credit and 45 prescribed hours by the AAFP and AMA Category I.

For further information or to register for the above courses contact: Marge Adey or Brenda Ram, Center for Continuing Education, University of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, Nebraska 68105. Telephone (402) 559-4152.

ADVANCED TRAUMA LIFE SUPPORT — March 23-24, May 28-29, September 28-29, 1987. Omaha, Nebraska. Fee: \$475. 17.0 Hours AMA Category I. 17.0 Prescribed Hours AAFP. 17.0 Hours ACEP Category I. For further information on these three courses contact Cindy S. Hanssen, University of Nebraska Medical Center, Center for Continuing Education, 42nd & Dewey Avenue, Omaha, Nebraska 68105-1065. Phone (402) 559-4152. In Nebraska, call: 800-228-1095. All other states, call: 800-228-9630.

UPCOMING UNMC CONTINUING EDUCATION COURSES

ADVANCED CARDIAC LIFE SUPPORT — Feb. 10, 1987 — Recertification. Omaha, Nebraska. Registration Fee: \$50. 7.2 Hours AMA Category I.

ADVANCED CARDIAC LIFE SUPPORT — Feb. 11, 1987 — Instructor Course. Omaha, Nebraska. Registration Fee: \$60. 6.0 Hours AMA Category I.

ADVANCED CARDIAC LIFE SUPPORT — Mar. 10-11, 1987 — Initial Certification. Omaha, Nebraska. Registration Fee: \$130. 14.5 Hours AMA Category I.

ADVANCED CARDIAC LIFE SUPPORT — Apr. 15, 1987 — Recertification. Omaha, Nebraska. Registration Fee: \$50. 7.2 Hours AMA Category I.

ADVANCED CARDIAC LIFE SUPPORT — May 18-19, 1987 — Initial Certification. Omaha, Nebraska. Registration Fee: \$130. 14.5 Hours AMA Category I.

ADVANCED CARDIAC LIFE SUPPORT — May 20, 1987 — Instructor Course. Omaha, Nebraska. Registration Fee: \$60. 6.0 Hours AMA Category I.

ADVANCED CARDIAC LIFE SUPPORT — June 1, 1987 — Recertification. Omaha, Nebraska. Registration Fee: \$50. 7.2 Hours AMA Category I.

For further information, contact Ann Fitzgerald, University of Nebraska Medical Center, Center for Continuing Education, 42nd & Dewey Avenue, Omaha, Nebraska 68105-1065. Phone (402) 559-4152. In Nebraska, call: 800-228-1095. All other states (except Alaska), call: 800-228-9630.

CREIGHTON UNIVERSITY

CORONARY HEART DISEASE AND HYPERTENSION — Feb. 1-6, 1987 — Freeport, Bahamas. 28 credit hours in Category 1. 28 Prescribed hours A.A.F.P. Registration fee \$375.00 prior to Nov. 1; \$450.00 after Nov. 1, 1986.

PATHOLOGY AND TREATMENT OF ESOPHAGEAL DISORDERS — Feb. 12-17, 1987 — Wyndham Rose Hall Beach Motel, Montego Bay, Jamaica. 24 credit hours in Category 1. Enrollment limited to 20. Registration fee \$475.00.

THE DETECTION, MANAGEMENT AND PREVENTION OF PRETERM BIRTH — February 28, 1987, Marriott Hotel, Omaha, Nebraska. Program Director: Washington C. Hill, M.D., Hours: TBA Fee: TBA.

ANNUAL OB-GYN POSTGRADUATE PROGRAM — Co-sponsored with the University of Nebraska, March 12-13, 1987, Holiday Inn Central, Omaha, NE. Program Directors: Joseph C. Scott, M.D. and James W. Daly, M.D., Hours: TBA. Fee: TBA.

ADVANCES IN ANTITHROMBOTIC THERAPY — Mar. 14, 1987 — Saint Joseph Hospital, Omaha, Nebraska. Program Director: Syed M. Mohiuddin, M.D. 6 credit hours Category 1, fee: TBA.

FLORIDA TUTORIAL (OB-GYN) — Mar. 26-27, 1987, Airport Marriott Hotel, Or-R.G. Monif, M.D. 14 credit hours Category 1; fee: \$175 (residents free)

THE ROLE OF ECHOCARDIOGRAPHY IN THE DIAGNOSIS AND MANAGEMENT OF CARDIAC EMERGENCIES — Apr. 10-11, 1987, Saint Joseph Hospital, Omaha, Nebraska. Program Director: Syed M. Mohiuddin, M.D. Hours: TBA. Fee: TBA.

INFECTIOUS DISEASE SYMPOSIUM — April 15, 1986, Saint Joseph Hospital, Omaha, Nebraska. 6 credit hours Category 1. Fee: TBA.

PEDIATRIC INFECTIOUS DISEASE SYMPOSIUM — May 8-9, 1987, Boys Town Conference Center, Boys Town, Nebraska. Program Director: Dr. Steven Chartrand. 12 credit hours Category 1. Fee: TBA.

FAMILY MEDICINE UPDATE — May 22-24, 1987, Okoboji, Iowa. Program Director: Fred J. Pettid, M.D., Hours: TBA, Fee: TBA.

MAURICE E. GRIER SYMPOSIUM (OB-GYN) — June 6, 1987, Marriott Hotel, Omaha, Nebraska. Program Director: James W. Daly, M.D. Hours: TBA. Fee: TBA.

WHAT YOU NEED TO KNOW ABOUT PERINATAL ULTRASOUND — June 12-13, 1987, Holiday Inn Central, Omaha, NE. Program Director: Washington C. Hill, M.D., Hours: TBA Fee: TBA. Omaha, NE

A DAY WITH THE PERINATOLOGISTS — September 25-26, 1987, Red Lion Inn, Omaha, NE. Program Director: Washington C. Hill, M.D., Hours: TBA, Fee: TBA.

VISITING PROFESSOR SCHEDULE — 1987
February 27-28, 1987

Harvey Zarem, M.D., Division of Plastic Surgery, University of California at Los Angeles.

March 13-14, 1987

Wallace Ritchie, M.D., Professor and Chairman, Department of Surgery, Temple University.

April 10-11, 1987

Clement Hiebert, M.D., Chief, Cardiovascular Surgery, Maine Medical Center.

April 17-18, 1987

Hiroshi Akiyama, M.D., Chief of Surgery, Toranomon Hospital, Tokyo, Japan.

May 8-9, 1987

Roland Folse, M.D., Professor and Chairman, Surgery, Southern Illinois University School of Medicine Chairman of Residency Review Committee.

September 11-12, 1987

John Cameron, M.D., Surgeon-in-Chief, The John Hopkins University, Department of Surgery, Baltimore, Maryland.

October 23-24, 1987

Hiram C. Polk, Jr., M.D., Professor and Chairman, Department of Surgery, University of Louisville, School of Medicine, Louisville, Kentucky.

For further information or to register, contact: Creighton University School of Medicine Division of CME, Omaha, NE 68178, 402-280-2550 or outside Nebraska Toll free 800-228-7212, Ext. 2550. The Creighton University School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.

LINCOLN GENERAL HOSPITAL

THE SIXTH ANNUAL CORNHUSKER/CANADIAN CLINICAL CONFERENCE — June 20-27, 1987 at Lynn Lake, Manitoba, Canada. Fee: \$150. For information contact: Sharlene Knippelmeyer, RN, BS, Education and Staff Development, Lincoln General Hospital, 2300 South 16th Street, Lincoln, NE 68502, (402) 473-5638.

UNIVERSITY OF KANSAS

For information concerning the following continuing education offerings sponsored by the University of Kansas Medical Center

contact: Carole Rosen, Promotions Coordinator, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Boulevard, Kansas City, KS 66103 (913) 588-4480.

A SPECIAL WORKSHOP ON THE USE OF CO₂ LASER IN ENT SURGERY — Jan. 30, 31, and Feb. 3, 1986, Apr. 10, 11 and 14, 1986, Sept. 25, 26, and 29, 1986, and Dec. 11, 12, and 15, 1986 (3rd day optional - O.R. instruction). Sponsored by the University of Kansas Medical Center. Located at Sudler Hall, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, Kansas. 15 hrs. AMA (cat.1), 9 hrs. or .9 American Nurses Association. Fees 2 days \$750 physicians, \$300 nurses; 3 days (includes O.R. instruction) \$900 physicians, \$350 nurses.

INTERNAL MEDICINE SYMPOSIUM — Mar. 1-7, 1987 — Sponsored by: University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, KS 66103. 18 Category I AMA, AAFP credit hours. Location: Cancun, Mexico. Contact: Eileen Buttron, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103.

COMMON PROBLEMS IN GASTRO-ENTEROLOGY — Mar. 16, 1987 — Sponsored by: University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, KS 66103. Credit: AMA, AAFP. Location: TBA. Contact: Eileen Buttron, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103.

SAM E. ROBERTS NUTRITION — Mar. 31, 1987 — University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, KS 66103. Credit: AMA, AAFP, CNE, ADA. Location: Battenfeld Auditorium, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103. Contact: Eileen Buttron, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103.

WHAT'S NEW IN DIABETES — Apr. 1, 1987 — Sponsor: University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, KS 66103. Credit: AMA, AAFP, CNE, ADA. Location: Battenfeld Auditorium, University of Kansas Medical Center, 39th & Rainbow, Kansas City, KS. Contact: Eileen Buttron, Office of Continuing Education, University of Kansas Medical Center. Contact: Eileen Buttron, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103. 913/588-4494.

PEDIATRICS — Apr. 2-3, 1987 — Sponsored by the University of Kansas Medical Center. Location: Battenfeld Auditorium, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103. Credit: AMA, AAFP, CNE. Contact: Eileen Buttron, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103.

37TH ANNUAL ANESTHESIOLOGY SYMPOSIUM — Apr. 24-26, 1987 — Sponsored by the University of Kansas Medical Center. Location: Crown Center Hotel, Kansas City, Missouri. Credit: AMA, AAFP, AANA. Contact: Eileen Buttron, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103.

TWELFTH ANNUAL FAMILY PRACTICE SYMPOSIUM — April 29-30, 1987. Sponsor: University of Kansas Medical Center. Location: Crown Center Hotel, Kansas City, Missouri. Credit: AMA, AAFP. Contact: Eileen Buttron, University of Kansas Medi-

cal Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103, (913) 588-4494.

ANTICOAGULANT AND ANTITHROMBOTIC THERAPY: STATE OF THE ART — April 25, 1987. Sponsored by the University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow, Kansas City, Kansas 66103. Location: Alameda Plaza Hotel. Credit: Category I AMA, AAFP, CNE. Contact Eileen Buttron, University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103 (913) 588-4480.

THIRTY-FIRST ANNUAL INFECTIOUS DISEASES SYMPOSIUM — May 1, 1987. Sponsor: University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow, Kansas City, Kansas 66103. Location: Crown Center Hotel. Credit: Category I AMA, AAFP. Contact: Eileen Buttron, University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103, (913) 588-4494.

KANSAS MEDICINE — May 15, 1987 — Sponsor: University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, KS 66103. Credit: AMA and AAFP. Location: Battenfeld Auditorium, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103. Contact: Eileen Buttron, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103. 913/588-4494.



"Living in the city
is lonely enough...
with herpes it's like
solitary confinement."

ZOVIRAX[®]
(acyclovir)
CAPSULES

**Prevent genital herpes
recurrences
month after month with
daily therapy.**

(In controlled studies, recurrences were
totally prevented for 4 to 6 months in up to
75% of patients.)

*Please see last page of this advertisement for
brief summary of prescribing information.*

ZOVIRAX[®] (acyclovir) CAPSULES

**Help free your
patients from
recurrences.**

Daily therapy

Coping with genital herpes is rarely easy. For some, the worst part is the pain and discomfort of frequent attacks — month after month, year after year. For others, the emotional burden presents a more difficult problem, leading to social isolation, anxiety, and diminished self-esteem.

Prevent or reduce recurrences

Although your patients have to live with herpes, they shouldn't have to suffer. Daily therapy with ZOVIRAX CAPSULES can help free them from the cycle of recurrent genital herpes. For many, one capsule three times a day can suppress recurrences completely while on therapy.

Generally well tolerated

Daily therapy with ZOVIRAX CAPSULES is generally well tolerated. The most frequent adverse reactions reported during clinical trials were headache, diarrhea, nausea/vomiting, vertigo, and arthralgia.

The physical and emotional difficulties posed by genital herpes are unique for each patient. The frequency and severity of recurrent episodes, as well as the emotional impact of the disease, should be considered when selecting daily therapy with ZOVIRAX CAPSULES.

*Please see brief summary of
prescribing information on next page*



Prevent recurrences month after month* **ZOVIRAX®** (acyclovir) **CAPSULES**

Brief Summary

INDICATIONS AND USAGE: Zovirax Capsules are indicated for the treatment of initial episodes and the management of recurrent episodes of genital herpes in certain patients.

The severity of disease is variable depending upon the immune status of the patient, the frequency and duration of episodes, and the degree of cutaneous or systemic involvement. These factors should determine patient management, which may include symptomatic support and counseling only, or the institution of specific therapy. The physical, emotional and psychosocial difficulties posed by herpes infections as well as the degree of debilitation, particularly in immunocompromised patients, are unique for each patient, and the physician should determine therapeutic alternatives based on his or her understanding of the individual patient's needs. Thus Zovirax Capsules are not appropriate in treating all genital herpes infections. The following guidelines may be useful in weighing the benefit/risk considerations in specific disease categories:

First Episodes (primary and nonprimary infections — commonly known as initial genital herpes):

Double-blind, placebo-controlled studies have demonstrated that orally administered Zovirax significantly reduced the duration of acute infection (detection of virus in lesions by tissue culture) and lesion healing. The duration of pain and new lesion formation was decreased in some patient groups. The promptness of initiation of therapy and/or the patient's prior exposure to Herpes simplex virus may influence the degree of benefit from therapy. Patients with mild disease may derive less benefit than those with more severe episodes. In patients with extremely severe episodes, in which prostration, central nervous system involvement, urinary retention or inability to take oral medication require hospitalization and more aggressive management, therapy may be best initiated with intravenous Zovirax.

Recurrent Episodes:

Double-blind, placebo-controlled studies in patients with frequent recurrences (6 or more episodes per year) have shown that Zovirax Capsules given for 4 to 6 months prevented or reduced the frequency and/or severity of recurrences in greater than 95% of patients. Clinical recurrences were prevented in 40 to 75% of patients. Some patients experienced increased severity of the first episode following cessation of therapy; the severity of subsequent episodes and the effect on the natural history of the disease are still under study.

The safety and efficacy of orally administered acyclovir in the suppression of frequent episodes of genital herpes have been established only for up to 6 months. Chronic suppressive therapy is most appropriate when, in the judgement of the physician, the benefits of such a regimen outweigh known or potential adverse effects. In general, Zovirax Capsules should not be used for the suppression of recurrent disease in mildly affected patients. Unanswered questions concerning the human relevance of *in vitro* mutagenicity studies and reproductive toxicity studies in animals given very high doses of acyclovir for short periods (see Carcinogenesis, Mutagenesis, Impairment of Fertility) should be borne in mind when designing long-term management for individual patients. Discussion of these issues with patients will provide them the opportunity to weigh the potential for toxicity against the severity of their disease. Thus, this regimen should be considered only for appropriate patients and only for six months until the results of ongoing studies allow a more precise evaluation of the benefit/risk assessment of prolonged therapy.

Limited studies have shown that there are certain patients for whom intermittent short-term treatment of recurrent episodes is effective. This

approach may be more appropriate than a suppressive regimen in patients with infrequent recurrences.

Immunocompromised patients with recurrent herpes infections can be treated with either intermittent or chronic suppressive therapy. Clinically significant resistance, although rare, is more likely to be seen with prolonged or repeated therapy in severely immunocompromised patients with active lesions.

CONTRAINDICATIONS: Zovirax Capsules are contraindicated for patients who develop hypersensitivity or intolerance to the components of the formulation.

WARNINGS: Zovirax Capsules are intended for oral ingestion only.

PRECAUTIONS: General: Zovirax has caused decreased spermatogenesis at high doses in some animals and mutagenesis in some acute studies at high concentrations of drug (see PRECAUTIONS — Carcinogenesis, Mutagenesis, Impairment of Fertility). The recommended dosage and length of treatment should not be exceeded (see DOSAGE AND ADMINISTRATION).

Exposure of Herpes simplex isolates to acyclovir *in vitro* can lead to the emergence of less sensitive viruses. The possibility of the appearance of less sensitive viruses in man must be borne in mind when treating patients. The relationship between the *in vitro* sensitivity of Herpes simplex virus to acyclovir and clinical response to therapy has yet to be established.

Because of the possibility that less sensitive virus may be selected in patients who are receiving acyclovir, all patients should be advised to take particular care to avoid potential transmission of virus if active lesions are present while they are on therapy. In severely immunocompromised patients, the physician should be aware that prolonged or repeated courses of acyclovir may result in selection of resistant viruses which may not fully respond to continued acyclovir therapy.

Drug Interactions: Co-administration of probenecid with intravenous acyclovir has been shown to increase the mean half-life and the area under the concentration-time curve. Urinary excretion and renal clearance were correspondingly reduced.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Acyclovir was tested in lifetime bioassays in rats and mice at single daily doses of 50, 150 and 450 mg/kg given by gavage. There was no statistically significant difference in the incidence of tumors between treated and control animals, nor did acyclovir shorten the latency of tumors. In 2 *in vitro* cell transformation assays, used to provide preliminary assessment of potential oncogenicity in advance of these more definitive life-time bioassays in rodents, conflicting results were obtained. Acyclovir was positive at the highest dose used in one system and the resulting morphologically transformed cells formed tumors when inoculated into immunosuppressed, syngeneic, weanling mice. Acyclovir was negative in another transformation system considered less sensitive.

In acute studies, there was an increase, not statistically significant, in the incidence of chromosomal damage at maximum tolerated parenteral doses of 100 mg/kg acyclovir in rats but not Chinese hamsters; higher doses of 500 and 1000 mg/kg were clastogenic in Chinese hamsters. In addition, no activity was found after 5 days dosing in a dominant lethal study in mice. In 6 of 11 microbial and mammalian cell assays, no evidence of mutagenicity was observed. At 3 loci in a Chinese hamster ovary cell line, the results were inconclusive. In 2 mammalian cell assays (human lymphocytes and L5178Y mouse lymphoma cells *in vitro*), positive responses for mutagenicity and chromosomal damage occurred, but only at concentrations at least 400 times the acyclovir plasma levels achieved in man.

Acyclovir has not been shown to impair fertility or reproduction in mice (450 mg/kg/day, p.o.) or in rats (25 mg/kg/day, s.c.). At 50 mg/kg/day s.c. in the rat, there was a statistically significant increase in post-implantation loss, but no concomitant decrease in litter size. In female rabbits treated subcutaneously with acyclovir subsequent to mating, there was a statistically significant decrease in implantation efficiency but no concomitant decrease in litter size at a dose of 50 mg/kg/day. No effect upon implantation efficiency was observed when the same dose was administered intravenously. In a rat peri- and postnatal study at 50 mg/kg/day s.c., there was a statistically significant decrease in the group mean numbers of corpora lutea, total implantation sites and live fetuses in the F₁ generation. Although not statistically significant,

cant, there was also a dose related decrease in group mean numbers of live fetuses and implantation sites at 12.5 mg/kg/day and 25 mg/kg/day, s.c. The intravenous administration of 100 mg/kg/day, a dose known to cause obstructive nephropathy in rabbits, caused a significant increase in fetal resorptions and a corresponding decrease in litter size. However, at a maximum tolerated intravenous dose of 50 mg/kg/day in rabbits, there were no drug-related reproductive effects.

Intraperitoneal doses of 320 or 80 mg/kg/day acyclovir given to rats for 1 and 6 months, respectively, caused testicular atrophy. Testicular atrophy was persistent through the 4-week post-dose recovery phase after 320 mg/kg/day; some evidence of recovery of sperm production was evident 30 days postdose. Intravenous doses of 100 and 200 mg/kg/day acyclovir given to dogs for 31 days caused aspermatogenesis. Testicles were normal in dogs given 50 mg/kg/day, i.v. for one month.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Acyclovir was not teratogenic in the mouse (450 mg/kg/day, p.o.), rat (50 mg/kg/day, s.c.) or rabbit (50 mg/kg/day, s.c. and i.v.). There are no adequate and well-controlled studies in pregnant women. Acyclovir should not be used during pregnancy unless the potential benefit justifies the potential risk to the fetus. Although acyclovir was not teratogenic in animal studies, the drug's potential for causing chromosome breaks at high concentration should be taken into consideration in making this determination.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Zovirax is administered to a nursing woman. In nursing mothers, consideration should be given to not using acyclovir treatment or discontinuing breastfeeding.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS — Short-Term Administration: The most frequent adverse reactions reported during clinical trials were nausea and/or vomiting in 8 of 298 patient treatments (2.7%) and headache in 2 of 298 (0.6%). Less frequent adverse reactions, each of which occurred in 1 of 298 patient treatments (0.3%), included diarrhea, dizziness, anorexia, fatigue, edema, skin rash, leg pain, inguinal adenopathy, medication taste and sore throat.

Long-Term Administration: The most frequent adverse reactions reported in studies of daily therapy for 3 to 6 months were headache in 33 of 251 patients (13.1%), diarrhea in 22 of 251 (8.8%), nausea and/or vomiting in 20 of 251 (8.0%), vertigo in 9 of 251 (3.6%), and arthralgia in 9 of 251 (3.6%). Less frequent adverse reactions, each of which occurred in less than 3% of the 251 patients (see number of patients in parentheses), included skin rash (7), insomnia (4), fatigue (7), fever (4), palpitations (1), sore throat (2), superficial thrombophlebitis (1), muscle cramps (2), paronychia (1), menstrual abnormality (4), acne (3), lymphadenopathy (2), irritability (1), accelerated hair loss (1), and depression (1).

DOSAGE AND ADMINISTRATION: Treatment of initial genital herpes: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 10 days (total 50 capsules).

Chronic suppressive therapy for recurrent disease: One 200 mg capsule 3 times daily for up to 6 months. Some patients may require more drug, up to one 200 mg capsule 5 times daily for up to 6 months.

Intermittent Therapy: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 5 days (total 25 capsules). Therapy should be initiated at the earliest sign or symptom (prodrome) of recurrence.

Patients With Acute or Chronic Renal Impairment: One 200 mg capsule every 12 hours is recommended for patients with creatinine clearance ≤ 10 ml/min/1.73 m².

HOW SUPPLIED: Zovirax Capsules (blue, opaque) containing 200 mg acyclovir and printed with "Wellcome ZOVIRAX 200". Bottles of 100 (NDC-0081-0991-55) and unit dose pack of 100 (NDC-0081-0991-56).

Store at 15°-30°C (59°-86°F) and protect from light.

*In controlled studies, recurrences were totally prevented for 4 to 6 months in up to 75% of patients.



Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

Copyright © 1986 Burroughs Wellcome Co. All rights reserved. 86-ZOV-5

Nebraska Medical Association Officers and Commissions

OFFICERS

Hiram R. Walker, M.D., Kearney	President
L. Dwight Cherry, M.D., Lincoln	President-Elect
Robert F. Shapiro, M.D., Lincoln	Secretary-Treasurer
William L. Schellpeper, Lincoln	Executive Director
James K. Ruigh, Lincoln	Assistant Executive Director

AMA Delegates — C. J. Cornelius, Jr., M.D., Sidney; John D. Coe, M.D., Omaha; AMA Alternate Delegates — Louis J. Gogela, M.D., Lincoln; Blaine Y. Roffman, M.D., Omaha.

BOARD OF DIRECTORS

Hiram R. Walker, Kearney	Chairman
L. Dwight Cherry, M.D., Lincoln	Vice-Chairman
Robert F. Shapiro, M.D., Lincoln	Secretary-Treasurer
Francis D. Donahue, M.D., Omaha	Past President
Paul E. Collicott, M.D.	Lincoln
Richard A. Raymond, M.D.	O'Neill
Donald J. Pavelka, M.D.	Omaha
Alvin A. Armstrong, M.D.	Scottsbluff
Richard H. Meissner, M.D.	Omaha
Stanley M. Truhlsen, M.D.	Omaha

COMMISSION ON ASSOCIATION AFFAIRS

Harry W. McFadden, M.D., Chairman	Omaha
R. A. Blatny, M.D.	Fairbury
Stuart P. Embury, M.D.	Holdrege
Joel T. Johnson, M.D.	Kearney
Bernard L. Kratochvil, M.D.	Omaha
Walter O'Donohue, M.D.	Omaha
Joseph E. Stitche, M.D.	Lincoln
R. C. Weldon, M.D.	Nebraska City

SCIENTIFIC SESSIONS COMMITTEE

Sushil S. Lacy, M.D., Chairman	Lincoln
Donald E. Waltemath, M.D., Convention Chairman	Lincoln
David L. Bacon, M.D.	Kearney
Paul J. Bender, Jr., M.D.	Omaha
Michael A. Breiner, M.D.	Lincoln
Mark A. Christensen, M.D.	Omaha
Richard A. Hranac, M.D.	Kearney
Donald J. Larson, M.D.	Lincoln
Donna K. Nelson, M.D.	Omaha
Richard M. Tempero, M.D.	Omaha

COMMISSION ON MEDICAL SERVICES

William L. Rumbolz, M.D., Chairman	Omaha
Patrick E. Clare, M.D.	Lincoln
C. J. Cornelius, Jr., M.D.	Sidney
Richard A. Hranac, M.D.	Kearney
F. William Karrer, M.D.	Omaha
Dale E. Michels, M.D.	Lincoln
Robert G. Osborne, M.D.	Lincoln
Richard J. Petersen, M.D.	Omaha
Kenton L. Shaffer, M.D.	Kearney

AD-HOC COMMITTEE ON ATHLETIC MEDICINE

Patrick E. Clare, M.D., Chairman	Lincoln
Stanley M. Bach, M.D.	Omaha
Warren G. Bosley, M.D.	Grand Island
S. I. Fuenning, M.D.	Lincoln
Jack K. Lewis, M.D.	Omaha
Morris B. Mellon, M.D.	Omaha
Richard A. Raymond, M.D.	O'Neill
Wm. Michael Walsh, M.D.	Omaha
George F. Sullivan, R.P.T.	Lincoln
Wayne Wagner, A.T.C.	Omaha

AD-HOC COMMITTEE ON MATERNAL & CHILD HEALTH

Kenton L. Shaffer, M.D., Chairman	Kearney
-----------------------------------	---------

Section on Maternal Mortality Review

George M. Adam, M.D.	Hastings
James G. Cummins, M.D.	Omaha
L. Palmer Johnson, M.D.	Lincoln
William Rayburn, M.D.	Omaha
William L. Rumbolz, M.D.	Omaha
Larry Wilson, M.D.	Gothenburg

Section on Perinatal Mortality Review

Lawrence C. Bausch, M.D.	Lincoln
Stacie R. Bleicher, M.D.	Lincoln
Robert S. Grant, M.D.	Lincoln
Robert M. Nelson, M.D.	Omaha

AD-HOC COMMITTEE ON PSYCHIATRY

Robert G. Osborne, M.D., Chairman	Lincoln
Jehangir B. Bastani, M.D.	Lincoln
Klaus Hartmann, M.D.	Lincoln
Harry C. Henderson, Jr., M.D.	Omaha
J. Whitney Kelley, M.D.	Omaha
William B. Long, M.D.	Omaha
Merle Sjogren, M.D.	Kearney

AD-HOC COMMITTEE ON GERIATRICS

Richard A. Hranac, M.D., Chairman	Kearney
Ronald L. Asher, M.D.	North Platte
J. Whitney Kelley, M.D.	Omaha
Jane F. Potter, M.D.	Omaha
William J. Reedy, M.D.	Omaha
John A. Ursick, M.D.	Omaha
Vernon G. Ward, M.D.	Omaha
Frederick Youngblood, M.D.	Omaha

AD-HOC COMMITTEE ON ALTERNATE HEALTH PLANS I

Carl J. Cornelius, Jr., M.D., Chairman	Sidney
Warren G. Bosley, M.D.	Grand Island
Dale W. Ebers, M.D.	Lincoln
Vernon F. Garwood, M.D.	Lincoln
Richard H. Meissner, M.D.	Omaha

Ex-Officio:

Michael J. Haller, M.D.	Omaha
Roger D. Mason, M.D.	Omaha

AD-HOC COMMITTEE ON ALTERNATE HEALTH PLANS II

Dale E. Michels, M.D., Chairman	Lincoln
Lonnie S. Albers, M.D.	Lincoln
Audrey A. Paulman, M.D.	Omaha
Dwayne J. Peetz, Jr., M.D.	Omaha
Harlan C. Shriner, M.D.	Lincoln
Sebastian J. Troia, M.D.	Omaha

COMMITTEE ON HEALTH PLANNING

Carl J. Cornelius, Jr., M.D., Chairman	Sidney
Gordon D. Adams, M.D.	Norfolk
Lewiston W. Birkmann, M.D.	Lincoln
James S. Carson, M.D.	McCook
Chris C. Caudill, M.D.	Lincoln
Allen D. Dvorak, M.D.	Omaha
Dale W. Ebers, M.D.	Lincoln
Louis J. Gogela, Jr., M.D.	Beatrice
Roger D. Mason, M.D.	Omaha
Donald F. Prince, M.D.	Minden
C. Lee Retelsdorf, M.D.	Omaha
Thomas H. Wallace, M.D.	Gordon

AD-HOC COMMITTEE ON TUMOR REGISTRY

F. William Karrer, M.D., Chairman	Omaha
Elvin G. Brown, M.D.	Hastings
John H. Casey, M.D.	Lincoln
James R. Commers, M.D.	Omaha
John B. Davis, M.D.	Omaha
Howard A. Dinsdale, M.D.	Lincoln
C. Lee Retelsdorf, M.D.	Omaha
Ron D. Scott, M.D.	Kearney

AD-HOC COMMITTEE ON LOW LEVEL RADIATION WASTE DISPOSAL

Richard J. Petersen, M.D., Chairman	Omaha
Allen D. Dvorak, M.D.	Omaha
Stanley Jaeger, M.S.	Omaha
Martin R. Lohff, M.D.	Omaha
Wm. H. Northwall, M.D.	Kearney
Merton A. Quaife, M.D.	Omaha
Jerald R. Schenken, M.D.	Omaha
Paul Steffes, M.D.	Omaha

COMMISSION ON LEGISLATION AND GOVERNMENTAL AFFAIRS

Craig L. Urbauer, M.D., Chairman	Lincoln
Ronald L. Klutman, M.D., Co-Chairman	Columbus
Dwayne J. Peetz, M.D., Advisor	Neligh
Judith A. Butler, M.D.	Superior
James H. Dunlap, M.D.	Norfolk
Dale W. Ebers, M.D.	Lincoln
Charles Gregorius, M.D.	Lincoln
Bruce W. Henricks, M.D.	Fremont
Barbara M. Heywood, M.D.	Papillion
John T. McGreer, III, M.D.	Lincoln
Dennis G. O'Leary, M.D.	Omaha
Robert G. Osborne, M.D.	Lincoln
Richard A. Raymond, M.D.	O'Neill
Herbert E. Reese, M.D.	Lincoln
Blaine Y. Roffman, M.D.	Omaha
Jerald R. Schenken, M.D.	Omaha
Bruce D. Smith, M.D.	Kearney

Todd S. Sorensen, M.D. Scottsbluff
 Richard B. Svehla, M.D. Omaha
 Mylan R. VanNewkirk, M.D. Scottsbluff
 Timothy O. Wahl, M.D. Omaha

AD-HOC COMMITTEE ON HEALTH POLICY STATEMENTS

C. Lee Retelsdorf, M.D., Chairman Omaha
 Daniel S. Durrie, M.D. Omaha
 Darroll J. Loschen, M.D. York
 Dale E. Michels, M.D. Lincoln
 Charles S. Wilson, M.D. Lincoln
 Frederick Youngblood, M.D. Omaha

AD-HOC COMMITTEE ON PROFESSIONAL LIABILITY

James H. Dunlap, M.D., Chairman Norfolk
 David L. Bacon, M.D. Kearney
 Warren G. Boslev, M.D. Grand Island
 Ernest W. Chupp, M.D. Omaha
 F. M. Gawecki, M.D. Papillion
 Dwaine J. Peetz, M.D. Neligh
 Herbert E. Reese, M.D. Lincoln
 Blaine Y. Roffman, M.D. Omaha

COMMISSION ON MEDICAL EDUCATION

Frederick F. Paustian, M.D., Chairman Omaha
 Robert L. Bass, M.D. Elkhorn
 Patrick E. Brookhouser, M.D. Omaha
 Christopher P. Crotty, M.D. Omaha
 Charles F. Damico, M.D. Hastings
 Charles A. Dobry, M.D. Omaha
 A. Dean Gilg, M.D. Lincoln
 William E. Lundak, M.D. Lincoln
 Richard L. O'Brien, M.D. Omaha
 Dwaine J. Peetz, Jr., M.D. Omaha
 Joseph C. Scott, M.D. Omaha
 Robert H. Waldman, M.D. Omaha

AD-HOC COMMITTEE ON HEALTH EDUCATION

Warren G. Boslev, M.D., Chairman Grand Island
 Stephen J. Lanspa, M.D. Omaha
 Paul H. Phillips, M.D. Scottsbluff
 Eileen C. Vautravers, M.D. Lincoln
 Wesley G. Wilhelm, M.D. Omaha
 Gregg F. Wright, M.D. Lincoln

COMMISSION ON PUBLIC AFFAIRS

Rodney S. W. Basler, M.D., Chairman Lincoln
 H. Jeffrey Deeths, M.D. Omaha
 Herbert D. Feidler, M.D. Norfolk
 Edward E. Gatz, M.D. Omaha
 Donald T. Glow, M.D. Omaha
 John J. Hoelsing, M.D. Omaha
 Roger P. Massie, M.D. Plainview
 Donald E. Mathews, M.D. Lincoln
 Harlan C. Shriner, M.D. Lincoln
 F. Thomas Waring, M.D. Fremont

COMMISSION ON HOSPITAL MEDICAL STAFF

Steven A. Schwid, M.D., Chairman Omaha
 Richard A. Hranac, M.D. Kearney
 Harry E. Keig, M.D. Papillion
 Glen F. Lau, M.D. Lincoln
 Barney B. Rees, M.D. Omaha
 Joseph G. Rogers, M.D. Lincoln
 Gerald Rounsborg, M.D. North Platte
 William A. Shiffermiller, M.D. Omaha
 Stephen D. Torpy, M.D. Omaha

COUNCILOR DISTRICTS AND COUNTIES

First District: Councilor: Stanley M. Truhlsen, Omaha. Counties: Douglas, Sarpy.
 Second District: Councilor: Howard A. Dinsdale, Lincoln. Counties: Cass, Lancaster, Otoe.
 Third District: Councilor: C. T. Frerichs, Beatrice. Counties: Gage, Johnson, Nemaha, Pawnee, Richardson.
 Fourth District: Councilor: Roger Massie, Plainview. Counties: Antelope, Cedar, Cuming, Dakota, Dixon, Knox, Madison, Pierce, Stanton, Thurston, Wayne.
 Fifth District: Councilor: William Chleborad, M.D., Fremont. Counties: Boone, Burt, Colfax, Dodge, Merrick, Nance, Platte, Washington.
 Sixth District: Councilor: Robert Herpol-sheimer, M.D., Seward. Counties: Butler, Hamilton, Polk, Saunders, Seward, York.
 Seventh District: Councilor: Robert Quick, M.D., Crete. Counties: Clay, Fillmore, Jefferson, Nuckolls, Saline, Thayer.
 Eighth District: Councilor: Floyd H. Shif-fermiller, Ainsworth. Counties: Boyd, Brown, Cherry, Holt, Keya Paha, Rock, Sheridan.
 Ninth District: Councilor: Stanley Nab-ity, Grand Island. Counties: Blaine, Buffalo, Custer, Dawson, Garfield, Grant, Greeley, Hall, Hooker, Howard, Loup, Sherman, Thomas, Valley, Wheeler.
 Tenth District: Councilor: David R. Little, M.D., Hastings. Counties: Adams, Chase, Dundy, Franklin, Frontier, Furnas, Gosper, Harlan, Hayes, Hitchcock, Kearney, Phelps, Red Willow, Webster.
 Eleventh District: Councilor: Donald E. Fischer, North Platte. Counties: Arthur, Deuel, Garden, Keith, Lincoln, Logan, McPherson, Perkins.
 Twelfth District: Councilor: Donald E. Wil-kinson, Alliance. Counties: Banner, Box Butte, Cheyenne, Dawes, Kimball, Morrill, Scotts Bluff, Sioux.

NEBRASKA MEDICAL ASSOCIATION Councilor Districts and Component County Medical Societies COMPONENT COUNTY MEDICAL SOCIETIES

COUNTY	PRESIDENT	SECRETARY-TREASURER
Adams	Kevin Wycoff, Hastings	Richard French, Hastings
Antelope-Pierce	Kenneth Peters, Plainview	David Johnson, Osmond
Box Butte	Wendell Fairbanks, Alliance	Chris Wilkinson, Alliance
Buffalo	Robert T. Urban, Kearney	L. D. Helmick, Kearney
Butler	Victor Thoendel, David City	Jack Kaufmann, David City
Cass	R. R. Anderson, Nehawka	Glen K. Knosp, Elmwood
Cheyenne-Kimball-Deuel	James Thayer, Sidney	Clinton Dorwart, Sidney
Cuming	Ed Simodynes, West Point	L. J. Chadek, West Point
Custer	Loren Jacobsen, Broken Bow	N. Leon Books, Broken Bow
Dawson	Willis L. Wiseman, Wayne	Rodney Sitorius, Cozad
Dodge	Rod Koerber, Fremont	W. B. Eaton, Fremont
Five	Tom Martin, Ord	Robert Benthack, Wayne
Four	Alan Langvardt, Beatrice	Otis Miller, Ord
Gage	L. W. Hake, Grand Island	Louis J. Gogela, Jr., Beatrice
Hall	Scott D. Bergfeld, Aurora	Gordon Francis, Grand Island
Hamilton	Melvin Campbell, Ainsworth	John Wilcox, Aurora
Holt & Northwest	Gordon O. Johnson, Fairbury	John Bryd, Valentine
Jefferson	D. M. Laflan, Creighton	R. A. Blatny, Fairbury
Knox	C. L. Barton, Lincoln	D. J. Nazengast, Bloomfield
Lancaster	Dell Shepherd, North Platte	M. A. Breiner, Lincoln
Lincoln	G. Tom Surber, Norfolk	Timothy O'Holleran, North Platte
Madison	Jerald R. Schenken, Omaha	C. Robert Adams, Norfolk
Metropolitan Omaha	G. Tom Surber, Norfolk	F. F. Paustian, Omaha
Northeast	Joel Hutchins, Gordon	C. Robert Adams, Norfolk
Northwest	Dean R. Thomson, Nebraska City	Roger Norvaez, Rushville
Otoe	Berl W. Spencer, Ogallala	Paul R. Madison, Nebraska City
Keith-Perkins-Chase	Arthur Liebenritt, Columbus	E. A. Holyoke, Ogallala
Platte-Loup Valley	Fred Gawecki, Papillion	Dwight Rickard, Columbus
Saline	I. M. French, Wahoo	Robert E. Tuma, Crete
Sarpy	Lowell Stratton, Mitchell	Fred Schwartz, Papillion
Scouters Bluff	Paul Plessman, Seward	John E. Hansen, Jr., Wahoo
Seward	Jeff Hollins, Geneva	Von Roberts, Scottsbluff
South Central	Gary Ensz, Auburn	Van Vahle, Seward
Southeast Nebr.	David A. Allerheiligen, McCook	Chas. F. Ashby, Geneva
Southwest Nebr.	H. Neal Sievers, Blair	George Voigtlander, Pawnee City
Washington-Burt	James D. Bell, York	E. C. Beyer, McCook
York		K. C. Bagby, Blair
		R. F. Brouillette, York

Physicians' Classified

Advertisements in this column are run at a rate of twenty cents per word with a minimum of \$10.00 per insertion. Copy must be received by the fifth of the month preceding the date of publication and should not exceed 50 words. Each advertisement will be taken out following its first appearance unless otherwise instructed. Where numbers follow advertisements, replies should be addressed in care of The Nebraska Medical Journal, 1512 FirTier Bank Building, Lincoln, Nebraska 68508.

ORTHOPEDIC SURGEON: Needed. Immediate opening for Board Certified/Eligible Orthopedist in medium size community. General orthopedic practice with opportunity to specialize in time. Send CV and letter of inquiry to: Foothills Orthopedic and Sports Medicine Clinic, 1260 Doctors Lane, Ft. Collins, CO 80524, Attention: Jan Wright, (303) 484-6587.

EXCELLENT OPPORTUNITIES FOR: Otorhinolaryngologist, Obstetrician/Gynecologist, Dermatologist, Psychiatrist, Endocrinologist, Radiologist, Orthopedist, and General/Family Practitioner. Excellent opportunity for physicians in Los Angeles suburb to join 80 member multispecialty medical group. Large fee-for-service and prepaid practice, no Medi-Cal. Excellent compensation program based on guarantee plus incentive, profit sharing and pension plan. Group provides health, dental, life and malpractice. Partnership in real estate and medical corporation available. See our Display Ad in this publication. Send CV to William Shaw, Associate Administrator, Mullikin Medical Center, 17821 S. Pioneer Blvd., Artesia, CA 90701.

FOR SALE: Family Practice in community of 1,500 near Lincoln. Near new equipment and excellent income history. No current competition. Very, very stable patient population. County less than 15% agriculturally-based. Will introduce and help if necessary. For occupancy July 1, 1987. Reply to Box 026, **Nebraska Medical Journal**, 1512 FirTier Bank Bldg., Lincoln, NE 68508.

PSYCHIATRIC RESIDENCY POSITIONS AVAILABLE: The University of South Dakota School of Medicine has just received official approval for Psychiatric Residency Training. The program will provide a broad based training which includes all areas needed for preparation for the Psychiatric Boards. Positions are available at the second year level for physicians already licensed and in practice in a clinical area of medicine. If interested, please contact K-Lynn Paul, M.D., Director of Psychiatric Residency Training, USD School of Medicine, Department of Psychiatry, 800 E. 21st, Sioux Falls, SD 57101; (605) 339-6785.

OPPORTUNITY: Be a "winter Texan" internist. Enjoy the warm, beautiful Rio Grande Valley, while practicing internal medicine with an internist. Texas license essential. Salary, living accommodations and malpractice insurance. Send curriculum vitae to 104 South Bryan Road, Mission, TX 78572 or contact (512) 585-2783 for more information.

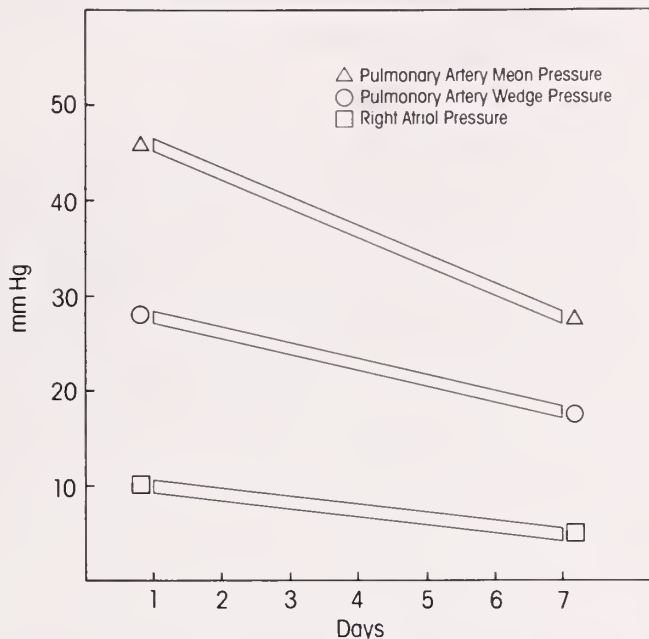
FAMILY PRACTICE PHYSICIAN NEEDED: Established need for a family practice physician to join seven man group in beautiful Northwest Iowa. Modern 10,000 sq. ft. clinic building is next door to 72-bed JCAH accredited county hospital. Unusually progressive community of 10,000 has economy far above the state average. Storm Lake offers 3,000 acre lake, 85 acres of park and recreation, and is home to Buena Vista College. One hour from Sioux City, and two hours from Omaha & Des Moines. Generous guarantee with immediate incentive plan, paid malpractice insurance, liberal vacation and seminar time, limited call requirements with seven other physicians and no HMO's in the area. Contact Darrell Pritchard, Manager, Buena Vista Clinic, P.C., 620 Northwestern Drive, Storm Lake, IA 50588. Call collect 712-732-5030.

OPENING: Family/General Practice physician in the position of Medical Director at the Hastings Regional Center. Board eligible or board certified physician in the area of family practice, with family or general practice experience. Contact Michael J. Sheehan, Facility Administrator, Hastings Regional Center, P.O. Box 579, Hastings, NE 68901, (402) 463-2471.

ADVERTISER'S INDEX

A	
Auto-Med Systems	14
Ayerst Laboratories	9, 10, 11, 12, 18, 19, 20
B	
Burroughs Wellcome	21, 22, 23
C	
Campbell Laboratories, Inc.	13
D	
Donley Medical Supply	6
L	
Eli Lilly & Company	4
M	
Medical Protective, Co.	8
Mullikin Medical Centers	7
N	
Norfolk Printing Co., Inc.	6
R	
Roche Laboratories	27, 28
S	
Smith Kline & French Labs	17
U	
U.S. Air Force	15
Upjohn Company	3

Significantly improves hemodynamics



Ten patients with CHF showed marked hemodynamic improvement after seven days of BUMEX® (bumetanide/Roche) (mean values $\pm$ SE). Adapted from Olesen, *et al.*¹

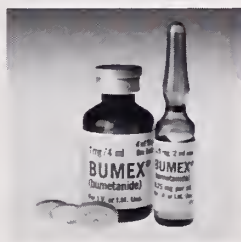
References: 1. Olesen KH, *et al. Postgrad Med J* 51(Suppl 6): 54-63, 1975. 2. Handier B, Dhingra RC, Rasen KM. *J Clin Pharmacol* 21: 706-711, Nov-Dec 1981. 3. Brater DC, *et al. Clin Pharmacol Ther* 34: 207-213, Aug 1983. 4. Brater DC, Fax WR, Chennavasin P. *J Clin Pharmacol* 21: 599-603, Nov-Dec 1981. 5. Davies DL, *et al. Clin Pharmacol Ther* 15: 141-155, Feb 1974.

Bumex®

bumetanide/Roche

0.5-mg, 1-mg and 2-mg scored tablets,
2-ml ampuls (0.25 mg/ml) and 2-ml, 4-ml
and 10-ml vials (0.25 mg/ml)

REDUCES FLUID OVERLOAD and eases the burden on the failing heart



BUMEX®
bumetanide/Roche
0.5-mg, 1-mg and 2-mg scored tablets,
2-ml ampuls, 2-ml, 4-ml and
10-ml vials (0.25 mg/ml)

BUMEX® (bumetanide/Roche)
Before prescribing, please consult complete product information, a summary of which follows:

WARNING: Bumex (bumetanide/Roche) is a potent diuretic which, if given in excessive amounts, can lead to a profound diuresis with water and electrolyte depletion. Therefore, careful medical supervision is required, and dose and dosage schedule have to be adjusted to the individual patient's needs. (See under **DOSAGE AND ADMINISTRATION** in complete product information.)

INDICATIONS AND USAGE: Edema associated with congestive heart failure, hepatic and renal disease, including the nephrotic syndrome. Almost equal diuretic response occurs after oral and parenteral administration of Bumex. If impaired gastrointestinal absorption is suspected or oral administration is not practical, Bumex should be given by the intramuscular or intravenous route. Successful treatment with Bumex following instances of allergic reactions to furosemide suggests a lack of cross-sensitivity.

CONTRAINDICATIONS: Anuria. Hypersensitivity and in patients in hepatic coma or in states of severe electrolyte depletion. Although Bumex can be used to induce diuresis in renal insufficiency, any marked increase in blood urea nitrogen or creatinine, or the development of oliguria during therapy of patients with progressive renal disease, is an indication for discontinuation of treatment. **WARNINGS:** Dose should be adjusted to patient's needs. Excessive doses or too frequent administration can lead to profound water loss, electrolyte depletion, dehydration, reduction in blood volume and circulatory collapse with the possibility of vascular thrombosis and embolism, particularly in elderly patients.

Prevention of hypokalemia requires particular attention in patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis and ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, certain diarrheal states, or other states where hypokalemia is thought to represent particular added risks to the patients. In patients with hepatic cirrhosis and ascites, sudden alterations of electrolyte balance may precipitate hepatic encephalopathy and coma. Treatment in such patients is best initiated in the hospital with small doses and careful monitoring of the patient's clinical status and electrolyte balance. Supplemental potassium and/or spironolactone may prevent hypokalemia and metabolic alkalosis in these patients.

In cats, dogs and guinea pigs, Bumex has been shown to produce ototoxicity. Since Bumex is about 40 to 60 times as potent as furosemide, it is anticipated that blood levels necessary to produce ototoxicity will rarely be achieved. The potential for ototoxicity increases with intravenous therapy, especially of high doses.

Patients allergic to sulfonamides may show hypersensitivity to Bumex.

PRECAUTIONS: Measure serum potassium periodically and add potassium supplements or potassium-sparing diuretics, if necessary. Periodic determinations of other electrolytes are advised in patients treated with high doses or for prolonged periods, particularly in those on low salt diets. Hypernatremia may occur. Reversible elevations of the BUN and creatinine may occur, especially with dehydration and in patients with renal insufficiency. Bumex may increase urinary calcium excretion.

Possibility of effect on glucose metabolism exists. Periodic determinations of blood sugar should be done, particularly in patients with diabetes or suspected latent diabetes.

Patients should be observed regularly for possible occurrence of blood dyscrasias, liver damage or idiosyncratic reactions.

Especially in presence of impaired renal function, use of parenterally administered Bumex should be avoided in patients to whom aminoglycoside antibiotics are also being given, except in life-threatening conditions.

Drugs with nephrotoxic potential and bumetanide should not be administered simultaneously. Since lithium reduces renal clearance and adds a high risk of lithium toxicity, it should not be given with diuretics.

Probenecid should not be administered concurrently with Bumex.

Concurrent therapy with indomethacin not recommended.

Bumex may potentiate the effects of antihypertensive drugs, necessitating reduction in dosage.

Interaction studies in humans have shown no effect on digoxin blood levels.

Interaction studies in humans have shown Bumex to have no effect on warfarin metabolism or on plasma prothrombin activity.

Pregnancy: Bumex should be given to a pregnant woman only if the potential benefit justifies the potential risk to the fetus.

Bumetanide may be excreted in breast milk.

Pediatric Use: Safety and effectiveness below age 18 not established.

ADVERSE REACTIONS: Muscle cramps, dizziness, hypotension, headache and nausea, and encephalopathy (in patients with preexisting liver disease).

Less frequent clinical adverse reactions are weakness, impaired hearing, rash, pruritus, hives,

electrocardiogram changes, abdominal pain, arthritic pain, musculoskeletal pain and vomiting.

Other clinical adverse reactions are vertigo, chest pain, ear discomfort, fatigue, dehydration,

sweating, hyperventilation, dry mouth, upset stomach, renal failure, asterixis, itching, nipple tenderness, diarrhea, premature ejaculation and difficulty maintaining an erection.

Laboratory abnormalities reported are hyperuricemia, azotemia, hyperglycemia, increased serum creatinine, hypochloremia, hypokalemia, hyponatremia, and variations in CO₂ content,

bicarbonate, phosphorus and calcium. Although manifestations of the pharmacologic action of Bumex, these conditions may become more pronounced by intensive therapy.

Diuresis induced by Bumex may also rarely be accompanied by changes in LDH, total serum bilirubin, serum proteins, SGOT, SGPT, alkaline phosphatase, cholesterol, creatinine clearance,

deviations in hemoglobin, prothrombin time, hematocrit, platelet counts and differential counts.

Increases in urinary glucose and urinary protein have also been seen.

DOSAGE AND ADMINISTRATION:

Oral Administration: The usual total daily dosage is 0.5 to 2.0 mg and in most patients is given as a single dose.

Parenteral Administration: Administer to patients (IV or IM) with GI absorption problem or who cannot take oral. The usual initial dose is 0.5 to 1 mg given over 1 to 2 minutes. If insufficient response, a second or third dose may be given at 2 to 3 hour intervals up to a maximum of 10 mg a day.

HOW SUPPLIED: Tablets, 0.5 mg (light green), 1 mg (yellow) and 2 mg (peach), bottles of 100 and 500, Prescription Packs of 30, Tel-E-Dose® cartons of 100. Imprint on tablets: 0.5 mg—BUMEX, 1 mg—BUMEX, 2 mg—BUMEX.

ROCHE BUMEX 0.5, 1 mg—ROCHE BUMEX 1, 2 mg—ROCHE BUMEX 2.

Ampuls: 2 ml, 0.25 mg/ml, boxes of ten.

Vials: 2 ml, 4 ml and 10 ml, 0.25 mg/ml, boxes of ten.



ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

OVERLOAD

Reduce fluid volume and improve hemodynamics in CHF

Edema due to congestive heart failure often demands highly effective diuresis to reduce the fluid load on the failing heart. Bumex® (bumetanide/Roche) is the next generation in loop diuretic therapy for three powerful reasons. It moves out an unsurpassed volume of fluid and sodium, resulting in significant reductions in edema and right atrial and pulmonary artery wedge pressures.^{1,2} It's almost completely absorbed through the GI tract, so it's easy to

titrate.³ And Bumex completes high-volume diuresis fast—within four hours at usual doses.^{4,5} Your patients spend less time in diuresis, more time in normal activities.

Bumex has a good safety profile; however, as with all loop diuretics, Bumex, if given in excessive amounts, can lead to profound diuresis with water and electrolyte depletion, including hypokalemia. Serum electrolytes should be monitored periodically, especially in patients on low salt diets or those treated for prolonged periods or on high doses.



Bumex®
bumetanide/Roche

0.5-mg, 1-mg and 2-mg scored tablets, 2-ml ampuls (0.25 mg/ml) and 2-ml, 4-ml and 10-ml vials (0.25 mg/ml)

**First line
loop diuretic therapy**

THE NEBRASKA MEDICAL JOURNAL



119
Years



Contents

Editorial

- The Keeper of the King's Rectum
Alexander N. Kingsley, M.D., F.A.C.S.

73

- Retained Grass Seed in the Eye or
"Where Not to Sow Your Wild Oats"
J. Kemper Campbell, M.D.

86

Original Articles

- Operations for Variceal Hemorrhage:
A Single Surgeon's Experience
Layton F. Rikkers, M.D.
Robert A. Cormier, R.N.

74

- Advantages in the Early Detection
of Diabetic Retinopathy
Ira A. Priluck, M.D.
William R. Del Monte
Michael H. Davidian, B.S.M.S.

80

- Transient Leukopenia Associated
With Topical Silver Sulfadiazine
in Burn Therapy

83

Gbaranen B. M. Gbaanador,
Anthony J. Policastro, M.D.
Donna Durfee, Pharm.D.
Joel N. Bleicher, M.D.

Perinatal Page

- Cesarean Section and the Small Fetus
Thomas L. Gross, M.D.

88

Features

- President's Page

93

- The Auxiliary

94

- Coming Meetings

96

THE N.Y. ACADEMY OF MED.
LIB-PERIODICALS DEPT.
2 EAST 103RD ST.
NEW YORK

Plan Now to Attend *1987 N.M.A. Annual Session*

These Scientific Sessions and Organizational Meetings Are Being Developed

NEBRASKA ALLERGY SOCIETY

This course will cover the topic of chronic EB Virus infection, the signs and symptoms, laboratory evaluation and its relationship to the area of Allergy syndromes.

NEBRASKA SOCIETY OF ANESTHESIOLOGISTS

This course is designed to increase the political effectiveness of an individual physician and groups of physicians at both the state and federal level.

MISSOURI VALLEY DERMATOLOGIC SOCIETY

The objective of this course is to present an update on dermatologic diagnostic and treatment techniques.

NEBRASKA CHAPTER, AMERICAN COLLEGE OF EMERGENCY PHYSICIANS

This program will emphasize important legal issues in emergency medicine centering on various forms of consent, treating patients who are mentally ill, intoxicated, combative, etc., emphasizing the physician's duty in emergency care. The program will also include discussion on the patient's right to treatment.

AMERICAN HEART ASSOCIATION, NEBRASKA AFFILIATE, LINCOLN DIVISION

This course is designed to update the primary care physician's knowledge of the current state of the art heart transplantation; selection of patients and patient transportation; and pre- and post-operative care of the heart transplant patient. An update on angioplasty and streptokinase will conclude the session.

NEBRASKA ORGAN RETRIEVAL SYSTEM, INC.

This course will present a brief update related to the status of organ and tissue recovery within the State of Nebraska. Influences of instate multiple organ transplantation, and both local and national legislation addressing pertinent issues will be explored.

NEBRASKA CHAPTER OF THE AMERICAN ACADEMY OF PEDIATRICS

The Nebraska Chapter of the American Academy of Pediatrics' course will be a comprehensive course in the approach to the physically and sexually abused child and adolescent.

NEBRASKA PERINATAL ORGANIZATION

There will be a wide range of perinatal topics, current as well as what can be expected in the future presented on April 24, 1987. Included will be discourses on genetics, neonatal infections, FHR

monitoring, infant stimulation, inborn errors of metabolism, home health care for NICU graduates, and panels discussing neonatal and perinatal issues.

NEBRASKA PSYCHIATRIC SOCIETY

This course will present suggestions for managing the atypical patient, as well as recent advances in psychological assessment including new developments in neuropsych. testing, restandardization of the M.M.P.I., and restructuring of Rorschach testing. It will also discuss applications of the computer to treatment of the psychiatric patient.

NEBRASKA LUNG ASSOCIATION

Obstructive sleep apnea is a recently recognized major health threat effecting an estimated 10 to 30 million individuals of varying ages and to varying degrees. This course is designed to familiarize the clinician with the symptoms, risk groups, potential complications and long term effects of these disorders. This program will also describe present methods of evaluation and outline current treatment options.

NEBRASKA CHAPTER OF THE AMERICAN COLLEGE OF SURGEONS

This meeting will consider and discuss current surgical topics submitted by members and their colleagues.

— Also Participating —

NEBRASKA SOCIETY OF INTERNAL MEDICINE/NEBRASKA CHAPTER OF THE AMERICAN COLLEGE OF PHYSICIANS

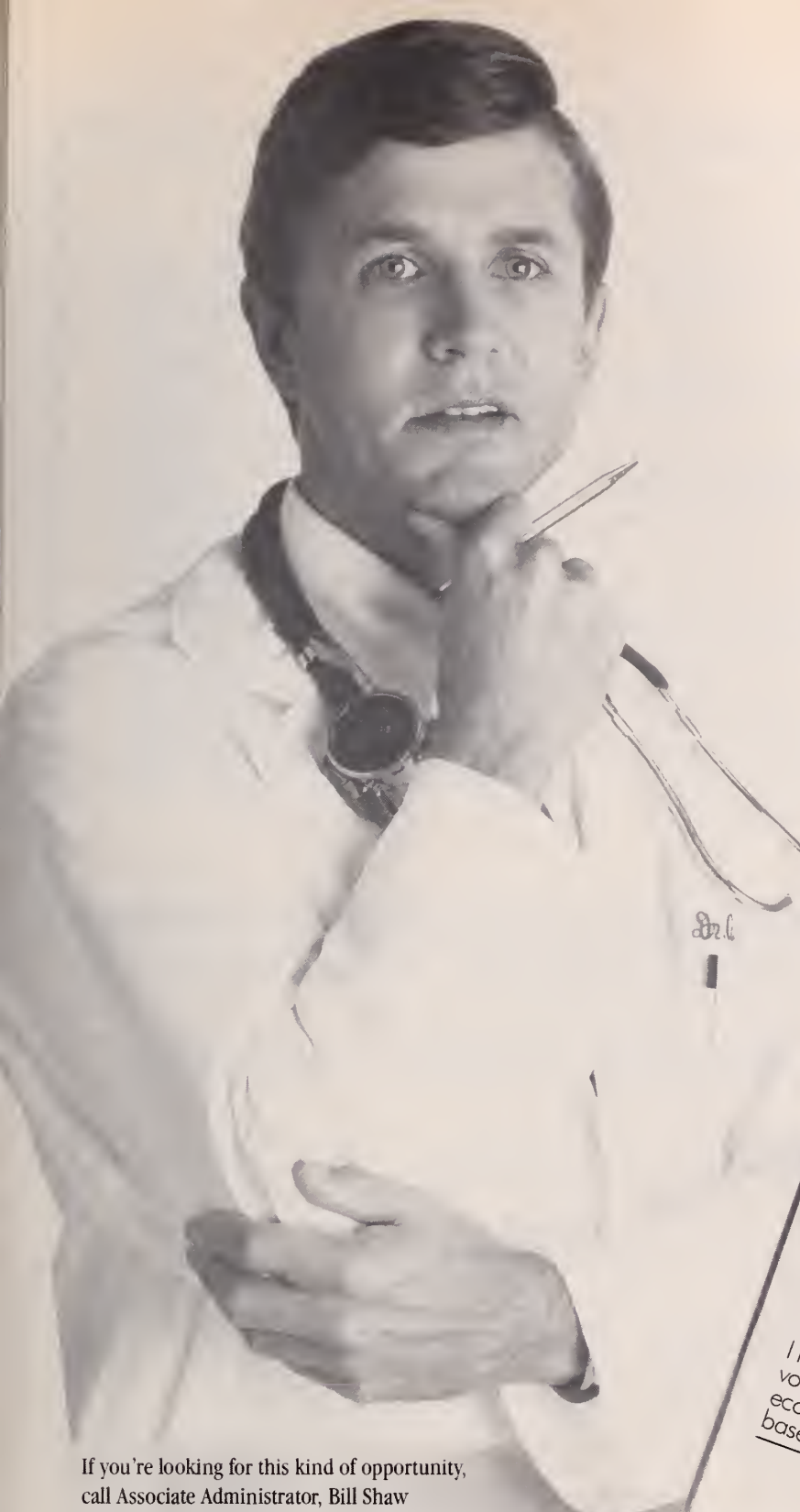
NEBRASKA SECTION, AMERICAN COLLEGE OF OBSTETRICIANS & GYNECOLOGISTS

NEBRASKA ACADEMY OF OPHTHALMOLOGY

NEBRASKA SOCIETY OF PLASTIC & RECONSTRUCTIVE SURGEONS

NEBRASKA THORACIC SOCIETY

April 24-28, 1987
Cornhusker Hotel Lincoln, NE



I made the right choice.

I wanted a group that works
well together.

I wanted a pleasant
working environment in
easy commuting distance
from my home.

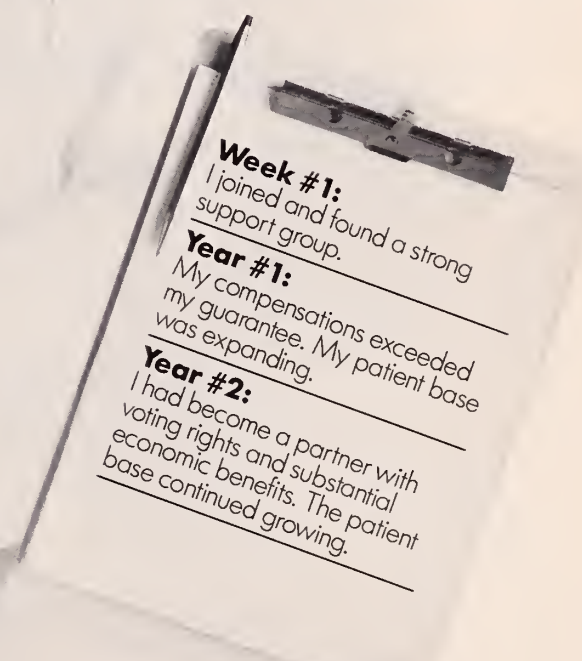
I wanted a built-in
patient base, and an
expanding practice.

I wanted to be rewarded
for work well done.

At Mullikin Medical Centers,
I found everything
I was looking for.

JOHN CALDWELL MD

John W. Caldwell, M.D.



Week #1:
I joined and found a strong
support group.

Year #1:
My compensations exceeded
my guarantee. My patient base
was expanding.

Year #2:
I had become a partner with
voting rights and substantial
economic benefits. The patient
base continued growing.

If you're looking for this kind of opportunity,
call Associate Administrator, Bill Shaw
at 213-860-6611, or send Bill your curriculum vitae.

Mullikin Medical Centers
17821 South Pioneer Boulevard
Artesia, CA 90701

Now, the opportunity is yours.

See our classified ad in this publication.

Mullikin Medical Centers

California's neighborhood doctor for more than 25 years.

HELP US HONOR KEN NEFF

Plan to attend the Sportsman's Day/Fun Night Banquet, Monday, April 27, 7:30 p.m., in the Ballroom of the Cornhusker Hotel, Lincoln.

Help us recognize the dedicated service Kenneth Neff gave our Nebraska Medical Association. Ken and his wife, Ida, will be our guests of honor at the banquet.

The Johnny Ray Gomez Show and "Stars of Tomorrow" will present an evening of musical entertainment.



Kenneth Neff

ATTENTION NON-PARTICIPATING PHYSICIANS!

Concerned about all of those
"MAXIMUM ALLOWABLE ACTUAL CHARGES?"

AUTO-MED INC. presents software for your IBM-PC or Compatible that will calculate the "M.A.A.C." for you.

MAAC can generate the REQUIRED LETTER you must send to certain patients about your charges.

BEST OF ALL THE SUPPLIED FLOPPY DISK & INSTRUCTIONS ARE ONLY \$49.95

ORDER NOW! Send Check for \$49.95 plus \$2.95 shipping

Name: _____

Address: _____

City: _____

State: _____ Zip: _____

AUTO-MED INC.

1922 South 149th Circle
Omaha, Nebraska 68144

The Nebraska Medical Journal

VOL. 72 NO. 3

MARCH 1987

EDITOR —

ALAN D. FORKER, M.D.
5505 Ellendale Road,
Lincoln, NE 68510

Associate Editors:

Deepak M. Gangahar, M.D., Lincoln
Charles S. Wilson, M.D., Lincoln

Editorial Board:

James O. Armitage, M.D., Omaha
Rodney S.W. Basler, M.D., Lincoln
Jehangir B. Bastani, M.D., Lincoln
John H. Casey, M.D., Lincoln
Paul E. Collicott, M.D., Lincoln
John F. Connolly, M.D., Omaha
Douglass Decker, Jr., M.D., Lincoln
Robert W. Gillespie, M.D., Lincoln
Stephen R. Grenier, M.D., Lincoln
Bruce D. Gutnik, M.D., Omaha
Roger Harned, M.D., Omaha
Edward A. Holyoke, Jr., M.D., Ogallala
Sushil S. Lacy, M.D., Lincoln
Hal K. Mardis, M.D., Omaha
Gilles R. G. Monif, M.D., Omaha
Walter J. O'Donohue, M.D. Omaha
William F. Rayburn, M.D., Omaha
John L. Reed, M.D., Lincoln
Jerald R. Schenken, M.D., Omaha
Kenton L. Shaffer, M.D., Kearney
Harlan C. Shriner, Jr., M.D., Lincoln
Patricia Cole Stivrins, M.D., Lincoln
Harold W. Thaut, M.D., Beatrice
Jon S. Thompson, M.D., Omaha
William L. Vosik, M.D., Kearney
Arthur Weaver, M.D., Lincoln



SUBSCRIPTION RATE

\$18.00 Per Year U.S.
\$18.00 Per Year Foreign Country
Single Copies \$1.50 Each

Copyright© 1987 Nebraska Medical Association. Information concerning reprints of the articles in this Journal and concerning obtaining permission for the reproduction of any portion of this Journal may be obtained from the Editor.

The Nebraska Medical Journal does not assume responsibility for statements made or opinions expressed by the authors. Products and services advertised are neither endorsed nor warranted by the Nebraska Medical Association. The Nebraska Medical Journal reserves the right to accept or reject advertising copy.

Published monthly and Second-Class Postage paid at Lincoln, Nebraska and at additional mailing offices (ISSN 0091-6730)

Address all correspondence relating to subscriptions, advertising or address changes to William L. Schellpeper, Business Manager, 1512 First Tier Bank Building, Lincoln, Nebraska 68508. Phone (402) 474-4472.

EDITORIAL —

- The Keeper of the King's Rectum** 73
Alexander N. Kingsley, M.D., F.A.C.S.

ORIGINAL ARTICLES —

- Operations for Variceal Hemorrhage:
A Single Surgeon's Experience** 74
Layton F. Rikkers, M.D.
Robert A. Cormier, R.N.
- Advantages in the Early Detection of Diabetic Retinopathy** 80
Ira A. Priluck, M.D.
William R. Del Monte
Michael H. Davidian, B.S.M.S.
- Transient Leukopenia Associated With
Topical Silver Sulfadiazine in Burn Therapy** 83
Gbaranen B. M. Gbaanador, M.D.
Anthony J. Policastro, M.D.
Donna Durfee, Pharm.D.
Joel N. Bleicher, M.D.
- Retained Grass Seed in the Eye or
"Where Not to Sow Your Wild Oats"** 86
J. Kemper Campbell, M.D.

PERINATAL PAGE —

- Cesarean Section and the Small Fetus** 88
Thomas L. Gross, M.D.

FEATURES —

- President's Page** 93
- The Auxiliary** 94
- Coming Meetings** 96

Since 1925

Nebraska's
Leading
Physicians and
Surgical
Supply House

Phone 474-3222



**DONLEY MEDICAL
SUPPLY COMPANY**

P.O. Box 83108, Lincoln, NE 68501
AUTHORIZED CONTRACT AGENT

REPRINTS

OF YOUR

Technical Articles

Are a direct presentation of research
and a valuable supplement
to any doctor's library.



It costs very little
to run reprints —
write us for prices

Norfolk Printing Co., Inc.

118 North Fifth
NORFOLK, NEBRASKA 68701

Letterheads - Statements

Envelopes - Office Forms

Quality Printing at the Right Price

ADVICE TO AUTHORS

Manuscripts should be submitted in duplicate to the Editor at the following address: Alan D. Forker, M.D., 5505 Ellendale Road, Lincoln, Nebraska 68510. The manuscript should be typewritten, double-spaced, on 8½ x 11 in. paper, with generous margins on each page. Number all pages in the right upper corner with the author's surname.

Review articles will be considered, and should generally be limited to less than 4,000 words and approximately 30 references.

Manuscripts describing original clinical or laboratory research should be limited to 2,000 words and approximately 20 references.

Acknowledgements must be given when material from other publications is included. Provide names of authors, title of article, title of journal or book, volume number, pages, month and year, and publisher's permission to reprint.

Always send a covering letter or letter of transmittal with each manuscript, and refer to the manuscript by its title, in the letter and all correspondence. Do not send a manuscript that was published elsewhere.

Title page: each manuscript should have a title page, including the full name, academic degree, and hospital or university affiliation of each author. A name and address for reprint requests should be included on the title page, including street address, city, state, and zip code.

Summary for article: all major scientific articles should be accompanied by a summary at the end of the article, summarizing the key information and recommendations presented.

References: should be listed in the order in which they appear in the article and should be typed double-spaced. Authors are responsible for the completeness and accuracy of all cited references. Journal references should include authors' names and initials, title of article, abbreviated name of Journal (as listed in Index Medicus), volume number, inclusive pages, and year of publication. References to books should include authors, title, location and name of publisher, year of publication, edition, and page numbers.

Tables and illustrations: should be typed double-spaced on separate sheets of 8½ x 11 in. paper. Each Table should have a title. Illustrations should be prepared professionally and submitted as high-quality, glossy, unmounted black-and-white photographic prints, at least 5 x 7 in. Do not send original artwork. Each illustration should be consecutively numbered and cited in the text. Each photograph should have a gummed label on the back containing the figure number, name of senior author and an arrow indicating top of figure. Legends should be typed double-space for each illustration. Permission to reproduce a picture of a patient is needed, if such a picture is included.

Letters-to-the-Editor: letters are encouraged by all readers and will be published as space permits and at the discretion of the Editor. All letters should be accompanied by the notation: For publication. Galley proofs generally will not be returned to the authors pre-publication.

Manuscripts will be published in the order in which they are received, particularly in the order in which galley proofs are returned from the authors. The Editor of this Journal assumes no responsibility for opinions and claims expressed in an article published in this Journal.

Reprints should be ordered from the printer, Norfolk Printing Company, Inc., P.O. Box 278, Norfolk, Nebraska 68701.

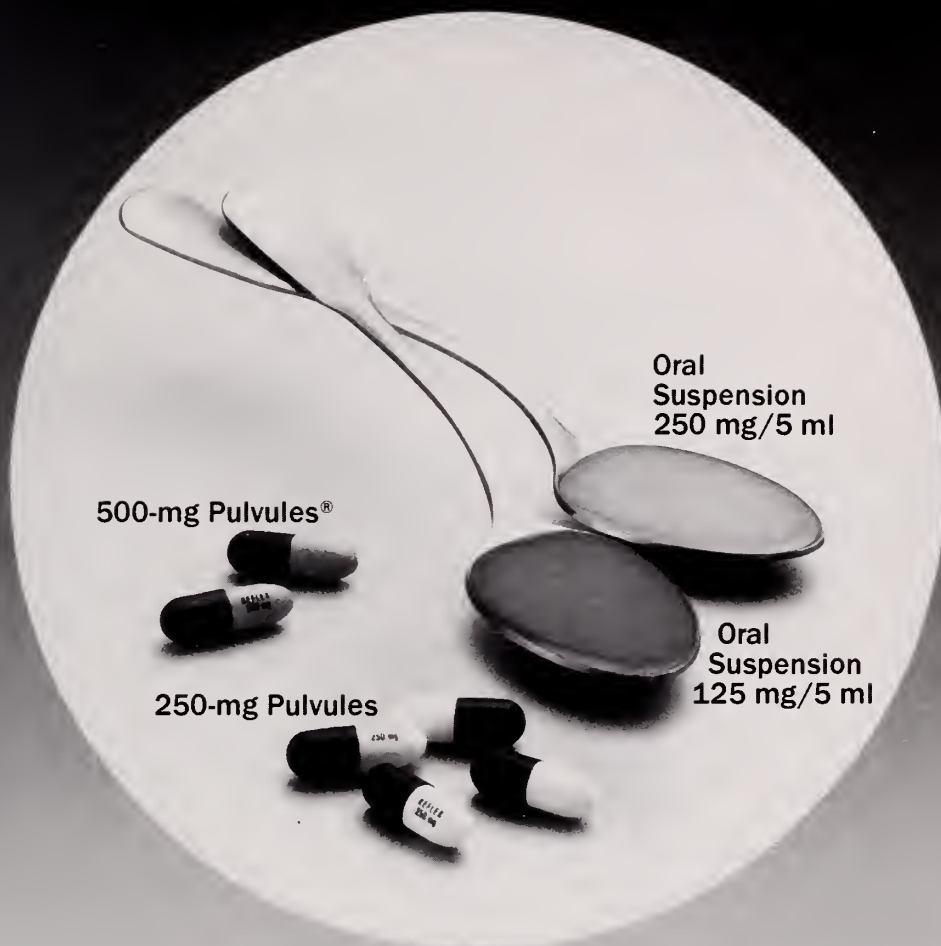


**NEBRASKA
MEDICAL ASSOCIATION
119th Annual Session**

April 24-28, 1987

**CORNHUSKER HOTEL
Lincoln, Nebraska**

Easy To Take



Keflex®
cephalexin

Additional information
available to the profession
on request.



420113

Dista Products Company
Division of Eli Lilly and Company
Indianapolis, Indiana 46285
Mfd. by Eli Lilly Industries, Inc.
Carolina, Puerto Rico 00630

TIMING IS!



EVERYTHING



Effective control time and time again¹

Effective control of fasting and postprandial glucose—patient after patient, meal after meal, year after year.

Insulin when it's needed

Insulin levels are rapidly elevated in response to a meal, then return promptly to basal levels after the meal challenge subsides.

Timed to minimize risks

Rapidly metabolized and excreted, with an excellent safety profile.¹ As with all sulfonylureas, hypoglycemia may occur.

In concert with diet in non-insulin-dependent diabetes mellitus

Glucotrol[®]
(glipizide) 5-mg and 10-mg
Scored Tablets



**SYNCHRONIZED
SULFONYLUREA THERAPY**



Please see brief summary of Glucotrol[®] (glipizide) prescribing information on next page.

ROERIG 
A division of Pfizer Pharmaceuticals
New York, New York 10017

Reference

1. Sachs R, Frank M, Fishman SK. Overview of clinical experience with glipizide. In *Glipizide: A Worldwide Review*. Princeton, NJ: Excerpta Medica; 1984. pp 163-172.

GLUCOTROL® (glipizide) Tablets

Brief Summary of Prescribing Information

INDICATIONS AND USAGE: GLUCOTROL is indicated as an adjunct to diet for the control of hyperglycemia in patients with non-insulin-dependent diabetes mellitus (NIDDM, type II) after an adequate trial of dietary therapy has proved unsatisfactory.

CONTRAINDICATIONS: GLUCOTROL is contraindicated in patients with known hypersensitivity to the drug or with diabetic ketoacidosis, with or without coma, which should be treated with insulin.

SPECIAL WARNING ON INCREASED RISK OF CARDIOVASCULAR MORTALITY: The administration of oral hypoglycemic drugs has been reported to be associated with increased cardiovascular mortality as compared to treatment with diet alone or diet plus insulin. This warning is based on the study conducted by the University Group Diabetes Program (UGDP), a long-term prospective clinical trial designed to evaluate the effectiveness of glucose-lowering drugs in preventing or delaying vascular complications in patients with non-insulin-dependent diabetes. The study involved 823 patients who were randomly assigned to one of four treatment groups (*Diabetes*, 19, supp. 2:747-830, 1970).

UGDP reported that patients treated for 5 to 8 years with diet plus a fixed dose of tolbutamide (1.5 grams per day) had a rate of cardiovascular mortality approximately 2-1/2 times that of patients treated with diet alone. A significant increase in total mortality was not observed, but the use of tolbutamide was discontinued based on the increase in cardiovascular mortality, thus limiting the opportunity for the study to show an increase in overall mortality. Despite controversy regarding the interpretation of these results, the findings of the UGDP study provide an adequate basis for this warning. The patient should be informed of the potential risks and advantages of GLUCOTROL and of alternative modes of therapy.

Although only one drug in the sulfonylurea class (tolbutamide) was included in this study, it is prudent from a safety standpoint to consider that this warning may also apply to other oral hypoglycemic drugs in this class, in view of their close similarities in mode of action and chemical structure.

PRECAUTIONS: Renal and Hepatic Disease: The metabolism and excretion of GLUCOTROL may be slowed in patients with impaired renal and/or hepatic function. Hypoglycemia may be prolonged in such patients should it occur.

Hypoglycemia: All sulfonylureas are capable of producing severe hypoglycemia. Proper patient selection, dosage, and instructions are important to avoid hypoglycemia. Renal or hepatic insufficiency may increase the risk of hypoglycemic reactions. Elderly, debilitated or malnourished patients and those with adrenal or pituitary insufficiency are particularly susceptible to the hypoglycemic action of glucose-lowering drugs. Hypoglycemia may be difficult to recognize in the elderly or people taking beta-adrenergic blocking drugs. Hypoglycemia is more likely to occur when caloric intake is deficient, after severe or prolonged exercise, when alcohol is ingested, or when more than one glucose-lowering drug is used.

Loss of Control of Blood Glucose: A loss of control may occur in diabetic patients exposed to stress such as fever, trauma, infection or surgery. It may then be necessary to discontinue GLUCOTROL and administer insulin.

Laboratory Tests: Blood and urine glucose should be monitored periodically. Measurement of glycosylated hemoglobin may be useful.

Information for Patients: Patients should be informed of the potential risks and advantages of GLUCOTROL, of alternative modes of therapy, as well as the importance of adhering to dietary instructions, of a regular exercise program, and of regular testing of urine and/or blood glucose. The risks of hypoglycemia, its symptoms and treatment, and conditions that predispose to its development should be explained to patients and responsible family members. Primary and secondary failure should also be explained.

Drug Interactions: The hypoglycemic action of sulfonylureas may be potentiated by certain drugs including non-steroidal anti-inflammatory agents and other drugs that are highly protein bound, salicylates, sulfonamides, chloramphenicol, probenecid, coumarins, monoamine oxidase inhibitors, and beta adrenergic blocking agents. *In vitro* studies indicate that GLUCOTROL binds differently than tolbutamide and does not interact with salicylate or dicumarol. However, caution must be exercised in extrapolating these findings to a clinical situation. Certain drugs tend to produce hyperglycemia and may lead to loss of control, including the thiazides and other diuretics, corticosteroids, phenothiazines, thyroid products, estrogens, oral contraceptives, phenytoin, nicotinic acid, sympathomimetics, calcium channel blocking drugs, and isoniazid. A potential interaction between oral miconazole and oral hypoglycemic agents leading to severe hypoglycemia has been reported. Whether this interaction also occurs with the intravenous, topical, or vaginal preparations of miconazole is not known.

Carcinogenesis, Mutagenesis, Impairment of Fertility: A 20-month study in rats and an 18-month study in mice at doses up to 75 times the maximum human dose revealed no evidence of drug-related carcinogenicity. Bacterial and *in vivo* mutagenicity tests were uniformly negative. Studies in rats of both sexes at doses up to 75 times the human dose showed no effects on fertility.

Pregnancy: Pregnancy Category C. GLUCOTROL (glipizide) was found to be mildly fetotoxic in rat reproductive studies at all dose levels (5-50 mg/kg). This fetotoxicity has been similarly noted with other sulfonylureas, such as tolbutamide and tolazamide. The effect is perinatal and believed to be directly related to the pharmacologic (hypoglycemic) action of GLUCOTROL. In studies in rats and rabbits no teratogenic effects were found. There are no adequate and well controlled studies in pregnant women. GLUCOTROL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Because recent information suggests that abnormal blood glucose levels during pregnancy are associated with a higher incidence of congenital abnormalities, many experts recommend that insulin be used during pregnancy to maintain blood glucose levels as close to normal as possible.

Nonteratogenic Effects: Prolonged severe hypoglycemia has been reported in neonates born to mothers who were receiving a sulfonylurea drug at the time of delivery. This has been reported more frequently with the use of agents with prolonged half-lives. GLUCOTROL should be discontinued at least one month before the expected delivery date.

Nursing Mothers: Since some sulfonylurea drugs are known to be excreted in human milk, insulin therapy should be considered if nursing is to be continued.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: In controlled studies, the frequency of serious adverse reactions reported was very low. Of 702 patients, 11.8% reported adverse reactions and in only 1.5% was GLUCOTROL discontinued.

Hypoglycemia: See PRECAUTIONS and OVERDOSAGE sections.

Gastrointestinal: Gastrointestinal disturbances, the most common, were reported with the following approximate incidence: nausea and diarrhea, one in 70; constipation and gastralgia, one in 100. They appear to be dose-related and may disappear on division or reduction of dosage. Chlostatic jaundice may occur rarely with sulfonylureas. GLUCOTROL should be discontinued if this occurs.

Dermatologic: Allergic skin reactions including erythema, morbilliform or maculopapular eruptions, urticaria, pruritus, and eczema have been reported in about one in 70 patients. These may be transient and may disappear despite continued use of GLUCOTROL. If skin reactions persist, the drug should be discontinued. Porphyria cutanea tarda and photosensitivity reactions have been reported with sulfonylureas.

Hematologic: Leukopenia, agranulocytosis, thrombocytopenia, hemolytic anemia, aplastic anemia, and pancytopenia have been reported with sulfonylureas.

Metabolic: Hepatic porphyria and disulfiram-like alcohol reactions have been reported with sulfonylureas. Clinical experience to date has shown that GLUCOTROL has an extremely low incidence of disulfiram-like reactions.

Endocrine Reactions: Cases of hyponatremia and the syndrome of inappropriate antidiuretic hormone (SIADH) secretion have been reported with this and other sulfonylureas.

Miscellaneous: Dizziness, drowsiness, and headache have been reported in about one in fifty patients treated with GLUCOTROL. They are usually transient and seldom require discontinuance of therapy.

OVERDOSAGE: Overdosage of sulfonylureas including GLUCOTROL can produce hypoglycemia. If hypoglycemic coma is diagnosed or suspected, the patient should be given a rapid intravenous injection of concentrated (50%) glucose solution. This should be followed by a continuous infusion of a more dilute (10%) glucose solution at a rate that will maintain the blood glucose at a level above 100 mg/dL. Patients should be closely monitored for a minimum of 24 to 48 hours since hypoglycemia may recur after apparent clinical recovery. Clearance of GLUCOTROL from plasma would be prolonged in persons with liver disease. Because of the extensive protein binding of GLUCOTROL (glipizide), dialysis is unlikely to be of benefit.

DOSE AND ADMINISTRATION: There is no fixed dosage regimen for the management of diabetes mellitus with GLUCOTROL, in general, it should be given approximately 30 minutes before a meal to achieve the greatest reduction in postprandial hyperglycemia.

Initial Dose: The recommended starting dose is 5 mg before breakfast. Geriatric patients or those with liver disease may be started on 2.5 mg. Dosage adjustments should ordinarily be in increments of 2.5-5 mg, as determined by blood glucose response. At least several days should elapse between titration steps.

Maximum Dose: The maximum recommended total daily dose is 40 mg.

Maintenance: Some patients may be effectively controlled on a once-a-day regimen, while others show better response with divided dosing. Total daily doses above 15 mg should ordinarily be divided.

HOW SUPPLIED: GLUCOTROL is available as white, dye-free, scored diamond-shaped tablets imprinted as follows: 5 mg tablet—Pfizer 411 (NOC 5 mg 0049-4110-66) Bottles of 100, 10 mg tablet—Pfizer 412 (NOC 10 mg 0049-4120-65) Bottles of 100.

CAUTION: Federal law prohibits dispensing without prescription.

More detailed professional information available on request.

© The Advertising Council, 1985

"YOU'D DIE IF YOU HAD MY JOB."



YOU COULD LEARN A LOT
FROM A DUMMY.
BUCKLE YOUR SAFETY BELT

ROERIG

Pfizer

A division of Pfizer Pharmaceuticals
New York, New York 10017

A Public Service Message Ad Council U.S. Department of Transportation



Jerald R. Schenken, M.D.

Hear Your AMA BOARD OF TRUSTEES REPRESENTATIVE

JERALD R. SCHENKEN, M.D.

speaking on
"Quality Assurance: The Next Horizon".

He will address the
Socio-Economic Breakfast Meeting
on Tuesday, April 28.

* * * * *

NMA ANNUAL SESSION

April 24-28

Cornhusker Hotel

Lincoln, NE

Reservation forms will be sent in late March.

ORGANIZATIONS, NATIONAL

American Academy of Family Physicians
1740 West 92nd St., Kansas City, MO 64114

American Academy of Pediatrics
James E. Strain, M.D., Executive Director
141 Northwest Point Road, P.O. Box 927
Elk Grove Village, IL 60007

American Academy of Physician Assistants
F. Lynn May, Executive Vice President
1117 N. 19th St., 3rd Floor
Arlington, VA 22209

American Academy of Ophthalmology
Thomas P. Kearns, M.D., President
655 Beach Street, P.O. Box 7424
San Francisco, CA 94120-7424

American College of Emergency Physicians
Colin C. Rorrie, Jr., Ph.D., Exec. Director
Box 619911, Dallas, TX 75261-9911

American College of Legal Medicine
Miss Betty Hanna, Executive Secretary
213 W. Institute Place, Ste. 412, Chicago, IL 60610

American College of Obstetricians & Gynecologists
Warren H. Pearse, M.D., Executive Director
600 Maryland Avenue SW, Ste. 300 E
Washington, D.C. 20024

American College of Physicians
John R. Ball, M.D., F.A.C.P., Exec. Vice President
4200 Pine St., Philadelphia, PA 19104

American College of Radiology
John J. Curry, Executive Director
1891 Preston White Drive, Reston, VA 22091

American College of Surgeons
C. Rollins Hanlon, M.D., Director
55 East Erie St., Chicago, IL 60611

American Diabetes Association, Inc.
Robert S. Bolan, Exec. Vice President
1660 Duke Street, Alexandria, VA 22314

American Heart Association National Center
Mr. Dudley Hafner, Exec. Vice President
7320 Greenville Avenue, Dallas, TX 75231

American Hospital Association
Carol M. McCarthy, Ph.D., J.D., President
840 North Lake Shore Dr., Chicago, IL 60611

American Medical Association
James H. Sammons, M.D., Exec. Vice President
535 North Dearborn St., Chicago, IL 60610

American Society of Anesthesiologists
Mr. J. W. Andes, Executive Secretary
515 Busse Hwy., Park Ridge, IL 60068

American Society of Clinical Pathologists
Robert A. Dietrich, M.D., Chief Executive
2100 W. Harrison St., Chicago, IL 60612

American Society of Internal Medicine
Joseph F. Boyle, M.D., Exec. Vice President
1101 Vermont N.W., Ste. 500, Washington, D.C. 20005

American Urological Association, Inc.
Mr. Richard J. Hannigan, Executive Secretary
1120 No. Charles St., Baltimore, MD 21201

Arthritis Foundation
Clifford M. Clarke, C.A.E., President
1314 Spring St., N.W., Atlanta, GA 30309

International College of Surgeons
F. C. Ottati, M.D., Int. Sec. General
1516 North Lake Shore Dr., Chicago, IL 60610

National Rehabilitation Association
633 S. Washington St. Alexandria, VA 22314

Radiological Society of North America
James J. McCort, M.D., President
1415 W. 22nd St., Oak Brook, IL 60521

**South Central Section of the American
Urological Association, Inc.**
Henry Kammandel, M.D., Past President
8300 Dodge St., Ste. 407, Omaha, NE 68114

PHRENOLOGY: PARA-NORMAL MYSTERIES: FACT OR FICTION



Robert W. McCoy

Robert W. McCoy of Golden Valley, Minnesota, will present a delightful review of the pseudo-science which once captivated Paris. Enjoy his display of a phrenology machine used in Nebraska in the early 1930's.

The occasion will be the 1987 Inaugural Banquet for the induction of Dr. L. Dwight Cherry, as President of the Nebraska Medical Association.

The Banquet will be held Sunday, April 26, at 7:00 p.m. in the Ballroom of the Cornhusker Hotel, Lincoln.



**Dates To Reserve
For 1987**

April 24, 25, 26, 27, 28

NMA ANNUAL SESSION

**Cornhusker Hotel
Lincoln, Nebraska**

To show you how many
hypertensives stayed on

INDERAL[®] LA
(PROPRANOLOL HCl)

after a major nationwide trial...



...we had
to find
just the
right room.



60,073 patients (90%) who started on INDERAL[®] LA stayed on INDERAL LA.^{1*}

Surprising? Not really.

Because most patients on INDERAL LA (propranolol HCl) don't even know it's working.

A recent double-blind, placebo-controlled, crossover study in 138 hypertensive patients² revealed that INDERAL LA has a side effects profile unsurpassed by atenolol or metoprolol — which shows how well-tolerated once-daily INDERAL LA can be.

Sole therapy or concomitant therapy?

Fifty-nine percent of the time, INDERAL LA stood on its own.

The patients in the nationwide compliance trial were no different from yours. Generally when the antihypertensive regimen is complicated, compliance may become a problem. So, the effectiveness of INDERAL LA as once-daily monotherapy is a big plus. Of the remaining hypertensives in the program, 36% were controlled merely with the addition of a diuretic to INDERAL LA.

For the noncompliant patients in your practice, INDERAL LA may well be the answer.

Almost 20,000 of the patients in the nationwide compliance trial were identified as having been noncompliant with their previous antihypertensive therapy. Their physicians reported that 88% showed improved compliance when placed on once-daily INDERAL LA.

Control, comfort, and compliance

ONCE-DAILY
INDERAL[®] LA
(PROPRANOLOL HCl) LONG ACTING
CAPSULES

Like conventional INDERAL Tablets, INDERAL LA should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree, and bronchial asthma.

*After a 30-day trial with INDERAL LA, physicians reported that 90% of the patients would remain on INDERAL LA.

The one you know best keeps looking better

Please see next page for brief summary of prescribing information

The one you know best keeps looking better

BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR)

INDERAL® LA brand of propranolol hydrochloride (Long Acting Capsules)

DESCRIPTION. Inderal LA is formulated to provide a sustained release of propranolol hydrochloride. Inderal LA is available as 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. Inderal is a nonselective beta-adrenergic receptor blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by Inderal, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

Inderal LA capsules (80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with Inderal LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of Inderal tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

Inderal LA should not be considered a simple mg for mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to Inderal LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, Inderal LA has been therapeutically equivalent to the same mg dose of conventional Inderal as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. Inderal LA can provide effective beta blockade for a 24-hour period.

The mechanism of the antihypertensive effect of Inderal has not been established. Among the factors that may be involved in contributing to the antihypertensive action are (1) decreased cardiac output, (2) inhibition of renin release by the kidneys, and (3) diminution of tonic sympathetic nerve outflow from vasomotor centers in the brain. Although total peripheral resistance may increase initially, it readjusts to or below the pretreatment level with chronic use. Effects on plasma volume appear to be minor and somewhat variable. Inderal has been shown to cause a small increase in serum potassium concentration when used in the treatment of hypertensive patients.

In angina pectoris, propranolol generally reduces the oxygen requirement of the heart at any given level of effort by blocking the catecholamine-induced increases in the heart rate, systolic blood pressure, and the velocity and extent of myocardial contraction. Propranolol may increase oxygen requirements by increasing left ventricular fiber length, end diastolic pressure and systolic ejection period. The net physiologic effect of beta-adrenergic blockade is usually advantageous and is manifested during exercise by delayed onset of pain and increased work capacity.

In dosages greater than required for beta blockade, Inderal also exerts a quinidine-like or anesthetic-like membrane action which affects the cardiac action potential. The significance of the membrane action in the treatment of arrhythmias is uncertain.

The mechanism of the antimigraine effect of propranolol has not been established. Beta-adrenergic receptors have been demonstrated in the pial vessels of the brain.

Beta receptor blockade can be useful in conditions in which, because of pathologic or functional changes, sympathetic activity is detrimental to the patient. But there are also situations in which sympathetic stimulation is vital. For example, in patients with severely damaged hearts, adequate ventricular function is maintained by virtue of sympathetic drive which should be preserved. In the presence of AV block, greater than first degree, beta blockade may prevent the necessary facilitating effect of sympathetic activity on conduction. Beta blockade results in bronchial constriction by interfering with adrenergic bronchodilator activity which should be preserved in patients subject to bronchospasm.

Propranolol is not significantly dialyzable.

INDICATIONS AND USAGE. Hypertension: Inderal LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. Inderal LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: Inderal LA is indicated for the long-term management of patients with angina pectoris.

Migraine: Inderal LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: Inderal LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. Inderal LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. Inderal is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with Inderal.

WARNINGS. CARDIAC FAILURE. Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or Inderal should be discontinued (gradually if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of Inderal therapy. Therefore, when discontinuance of Inderal is planned the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If Inderal therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute Inderal therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. Inderal should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY. The necessity or desirability of withdrawal of beta-blocking therapy prior

to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

Inderal (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, e.g., dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA. Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia in labile insulin-dependent diabetes. In these patients, it may be more difficult to adjust the dosage of insulin.

THYROTOXICOSIS. Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. General: Propranolol should be used with caution in patients with impaired hepatic or renal function. Inderal (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenergic receptor blockade can cause reduction of intraocular pressure. Patients should be told that Inderal may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

Clinical Laboratory Tests. Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS. Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if Inderal is administered. The added catecholamine blocking action may produce an excessive reduction of resting sympathetic nervous activity, which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Carcinogenesis, Mutagenesis, Impairment of Fertility. Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

Pregnancy. Pregnancy Category C. Inderal has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. Inderal should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. Inderal is excreted in human milk. Caution should be exercised when Inderal is administered to a nursing woman.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: bradycardia, congestive heart failure, intensification of AV block, hypotension, paresthesia of hands, thrombocytopenic purpura, arterial insufficiency, usually of the Raynaud type.

Central Nervous System: lightheadedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to cataplexy, visual disturbances, hallucinations, an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune. In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: alopecia, LE-like reactions, psoriasisiform rashes, dry eyes, male impotence and Peyronie's disease have been reported rarely. Oculocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. Inderal LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from Inderal tablets to Inderal LA capsules, care should be taken to assure that the desired therapeutic effect is maintained. Inderal LA should not be considered a simple mg for mg substitute for Inderal. Inderal LA has different kinetics and produces lower blood levels. Retitration may be necessary especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—Dosage must be individualized. The usual initial dosage is 80 mg Inderal LA once daily whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood-pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—Dosage must be individualized. Starting with 80 mg Inderal LA once daily, dosage should be gradually increased at three to seven day intervals until optimum response is obtained. Although individual patients may respond at any dosage level, the average optimum dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—Dosage must be individualized. The initial oral dose is 80 mg Inderal LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimum migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximum dose, Inderal LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg Inderal LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

REFERENCES:

1. Inderal LA National Compliance Evaluation Program. Data on file, Ayerst Laboratories.
2. Ravid M, Lang R, Jutrin I. The relative antihypertensive potency of propranolol, oxprenolol, atenolol, and metoprolol given once daily. *Arch Intern Med* 1985;145:1321-1323.

6412 187

Ayerst

AYERST LABORATORIES
New York, NY 10017

© 1986 Ayerst Laboratories

ORGANIZATIONS, STATE

- American Cancer Society, Nebraska Division, Inc.**
Don W. McClure, Exec. Vice President
8502 West Center Rd., P.O. Box 241255, Omaha 68124-5255
- American Diabetes Association — Nebraska Affiliate, Inc.**
Ron Van Ryswyk, Executive Director
7377 Pacific St., Ste. 216A, Omaha 68114
- American Heart Association, Nebraska Affiliate**
Dennis N. Nissen, Executive Director
3624 Farnam St., Omaha 68131
- American Lung Association of Nebraska**
8901 Indian Hills Dr., Ste. 107, Omaha 68114
- American Red Cross**
P.O. Box 83267
1701 "E" St., Lincoln 68501
- Arthritis Foundation, Nebraska Chapter, Inc.**
Mrs. Ellen Wright, Exec. Director
2229 N. 91st Court, Omaha 68134
- Blue Cross and Blue Shield of Nebraska**
Wm. H. Heavey, President
P.O. Box 3248, Main Station, Omaha 68180
- Creighton University School of Medicine**
Richard O'Brien, M.D., Dean
California at 24th St., Omaha 68178
- Cystic Fibrosis Foundation, Nebraska Chapter**
Charles R. Bercaw, Exec. Director
5017 Leavenworth St., Omaha 68106
- Dairy Council of Central States, Inc.**
Suite 103, Hillcrest Bldg.
76th & Main, Ralston 68127
- Division of Rehabilitation Services**
Nebraska Department of Education
6th Floor, 301 Centennial Mall South, Lincoln 68509
- Division of Rehabilitation Services for the Visually Impaired**
James. S. Nyman, Ph.D., Director
4600 Valley Road, Lincoln 68510
- Easter Seal Society of Nebraska**
Mrs. Letitia K. Simmons, Executive Director
3015 North 90th St., #6, Omaha 68134
- Health Manpower Referral Service, State of Nebraska**
3rd Floor, State Office, 301 Centennial Mall South, Lincoln 68509
- Lincoln Council on Alcoholism and Drugs, Inc.**
Room 212, 215 Centennial Mall, Lincoln 68508
- March of Dimes — Birth Defects Foundation**
1618 L Street, Lincoln 68508
- MID-PLAINS POISON CONTROL CENTER**
Childrens Memorial Hospital, 8301 Dodge St., Omaha 68114
(402) 390-5400 or 800-642-9999 (toll free Nebraska)
- Missouri Valley Dermatologic Society**
Richard Q. Crotty, M.D., Secretary
7822 Davenport St., Omaha 68114
- Muscular Dystrophy Association**
1912 No. 90th St., Lower Level, Omaha 68114
- National Kidney Foundation of Nebraska**
Karen Engelsman, Executive Director
2217 No. 91st Plaza, Omaha 68134
(402) 397-9234 — NE toll free 800-642-1255
- National Multiple Sclerosis Society — Nebraska-Iowa Midlands Chapter**
3624 Leavenworth, Omaha 68105
- National Society to Prevent Blindness, Nebraska Affiliate**
120 North 69th St., Suite 203, Omaha 68132-2720
- Nebraska Academy of Ophthalmology**
Mylan VanNewkirk, M.D., President
329 West 40th. Scottsbluff 69361
- Nebraska Academy of Otolaryngology**
Michael Crawford, M.D., President
201 Ridge St., #311, Council Bluffs, IA 51501
- Nebraska Allergy Society**
Linda B. Ford, M.D., President
401 E. Gold Coast Rd., Papillion 68128
- Nebraska Association of Medical Assistants, Inc.**
Marie Madison, President
405 East Stolley Park Rd., Grand Island 68801
- Nebraska Association of Nuclear Physicians, Inc.**
Merton A. Quaife, M.D., President
Dept. of Radiology, UNMC - 42nd & Dewey Ave., Omaha 68105
- Nebraska Association of Pathologists**
Joseph Rapoport, M.D., President
6901 No. 72nd St., Omaha 68122
- Nebraska Chapter — American Academy of Family Physicians**
David H. Filipi, M.D., Secretary-Treasurer
Mrs. Phyllis G. Hansen, Executive Secretary
River City Office Park, #202, 401 N. 117th, Omaha 68154
- Nebraska Chapter — American Academy of Physician Assistants**
John Ries, P.A.-C, President
1101 N. 50th, Omaha 68132
- Nebraska Chapter — American Academy of Pediatrics**
H. J. Kuehn, M.D., Chairman
8300 Dodge St., #219, Omaha 68114
- Nebraska Chapter — American College of Emergency Physicians**
Richard L. Keller, M.D., President
9641 No. 29th, Omaha 68112
- Nebraska Chapter — American College of Physicians**
Frederick F. Paustian, M.D., F.A.C.P., Governor
UNMC - 42nd & Dewey Ave., Omaha 68105
- Nebraska Chapter — American College of Surgeons**
Louis J. Gogela, M.D., Past President
2221 South 17th St., Lincoln 68502
- Nebraska Chapter of Myasthenia Gravis Foundation**
John F. Aita, M.D., Medical Advisor
105 So. 49th St., Omaha 68132
- Nebraska Dental Association**
Barry Ross, Executive Director
134 So. 13th St., Suite 1007, Lincoln 68508
- Nebraska Dietetic Association**
Linda O. Young, M.S., R.D., President
University of NE - 214 Ruth, Leventon Hall, Lincoln 68503
- Nebraska Health Care Association**
Sandra H. Hockley, Executive Director
3100 "O" St., Ste. 7, Lincoln 68510
- Nebraska Hospital Association**
Harlan Heald, President
Box 94833, 1335 "L" St., Lincoln 68509
- Nebraska League for Nursing**
Priscilla Allen, R.N., President
Box 126, Daykin 68338
- Nebraska Medical Association**
William L. Schellpeper, Executive Director
1512 FirstTier Bank Bldg., Lincoln 68508
- Nebraska Medical Foundation**
William L. Schellpeper, Secretary
1512 FirstTier Bank Bldg., Lincoln 68508
- Nebraska Nurses Association**
Mary Ann Sak, Executive Director
Suite 711, Terminal Bldg., Lincoln 68508
- Nebraska Orthopaedic Society**
Ronald Schwab, M.D., Secretary
2300 South 13th St., Lincoln 68502
- Nebraska Perinatal Organization**
Joy Jacobs, R.N., Secretary-Treasurer
St. Elizabeth Community Health Center - Labor & Del. Dpt.,
566 So. 70th St., Lincoln 68510
- Nebraska Pharmacists Association**
Tom R. Dolan, R.P., Executive Director
600 So. 12th, Lincoln 68508
- Nebraska Psychiatric Society, District Branch of the American Psychiatric Association**
John Y. Donaldson, M.D., President
6901 No. 72nd St., Omaha 68122
- Nebraska Public Health Association**
President, N.P.H.A.
P.O. Box 94813, Lincoln 68509
- Nebraska Radiological Society**
Joseph C. Anderson, M.D., President
Dept. of Radiology, UNMC - 42nd & Dewey, Omaha 68105
- Nebraska Rheumatism Association**
Arthur L. Weaver, M.D., President
2121 South 56th St., Lincoln 68506
- Nebraska Section, American College of Obstetricians & Gynecologists**
Larry E. Roffman, M.D.
800 Doctors Bldg., Omaha 68131
- Nebraska Society of Anesthesiologists**
K. Reed Peters, M.D., President
1512 FirstTier Bank Bldg., Lincoln 68508
- Nebraska Society of Internal Medicine**
Vernon Garwood, M.D., President
120 Wedgewood Drive, Suite A, Lincoln 68510
- Nebraska Society for Respiratory Therapy**
Lynn Lamprecht, RRT, President
Mem. Hospital of Dodge Co., 450 E. 23rd St.
- Nebraska State Department of Health**
Gregg Wright, M.D., Director of Health
P.O. Box 95007, 301 Centennial Mall South, Lincoln 68509
- Nebraska State Obstetric and Gynecology Society**
Dennis D. Beavers, M.D., Secretary-Treasurer
720 No. 87th St., Omaha 68114
- Nebraska Stroke Foundation**
Karyl Newman, President
P.O. Box 67004, Lincoln 68506
- Nebraska Urological Association**
Charles F. Damico, M.D., F.A.C.S., President
2115 No. Kansas, Hastings 68901
- Nebraska Veterinary Medical Association**
Don Ellerbee, Executive Director
209 West 9th St., Hastings 68901
- Omaha Mid-West Clinical Society**
Ms. Lorraine E. Seibel, Executive Secretary
7363 Pacific St., #205-B, Omaha 68114
- United Cerebral Palsy of Lancaster County, Inc.**
Jane Hoffart, Client Services Rep.
P.O. Box 80103, Lincoln 68501
- University of Nebraska Medical Center**
Charles E. Andrews, M.D., Chancellor
42nd & Dewey Ave., Omaha 68105



Physicians who have thoroughly investigated their choices are selecting MDX* medical data software.

MDX

*MDX is a trademark of Calyx, Inc.

Call us about the multi-user, multi-tasking MDX system. We will send you a video tape presentation.



INFO-BUILDERS, INC.

402/331-2546
11203 JOHN GALT BOULEVARD
OMAHA, NEBRASKA 68137

Providing complete installation, training and support services.

NEBRASKA MEDICAL ASSOCIATION

119th Annual Session

April 24-28, 1987

**CORNHUSKER HOTEL
Lincoln, Nebraska**

AMA News Notes

The Florida Medical Assn. (FMA) has called for the formation of a coalition to identify and support broad-based funding sources to finance Florida's indigent health care needs. The FMA urged health groups, businesses, associations, and individual citizens to join in considering alternatives for funding indigent care.

"Indigent care is a societal problem and should be funded by some broad-based means where every citizen will contribute equally," said James B. Perry, M.D., FMA president. "Current funding of indigent care, which is woefully inadequate, falls squarely on the shoulders of the health community."

One proposed funding source the coalition will address is a state sales tax. A bill providing for a half-cent increase in the state sales tax is slated to be introduced in the 1987 legislature. The tax would be expected to raise \$500 million.

The FMA issued its call at a symposium on indigent care, sponsored by the medical society and attended by state legislators, health officials, and national experts in the area of indigent health care.

* * *

A 15-minute videotape, "Counseling the HIV Antibody-Positive Patient," has been produced by the Los Angeles County Medical Assn. (LACMA).

The educational program is a "docu-drama designed and produced to provide physicians with a positive example of a successful counseling session" between a physician and a patient who tests positive for the human immunodeficiency virus, LACMA said. The purpose of the videotape is "to enhance the AIDS prevention program by reinforcing the physician's ability to counsel and educate the antibody-positive patient".

The program was written by Neil Schram, M.D., chairman of the L.A. City/County AIDS Task Force, with several other physicians serving as consultants. Executive producer was David Zeitlin, director of communications of LACMA.

(Continued on page 24-A)

CONFIRMED

CONFIRMED BY CLINICAL EVIDENCE

ZANTAC® 150 h.s.

ranitidine HCl/Glaxo 150 mg tablets

EFFECTIVE MAINTENANCE THERAPY

for healed duodenal ulcer patients

CONFIRMED

In two randomized, double-blind, and well-controlled clinical trials, ZANTAC 150 mg h.s. significantly superior to cimetidine 400 mg h.s. for maintenance therapy in healed duodenal ulcers.

Percent of patients with observed duodenal ulcer recurrence

		0-4 months	0-8 months	0-12 months	No. patients
USA ¹	ranitidine 150 mg h.s.	9%	14%*	16%†	60
	cimetidine 400 mg h.s.	23%	34%	43%	66
UK, Ireland, Australia ²	ranitidine 150 mg h.s.	8%‡	14%‡	23%‡	243
	cimetidine 400 mg h.s.	21%	34%	37%	241

*p=0.02

†p=0.01

‡p≤0.004

%=life-table estimates

All patients were permitted prn antacids for relief of pain.

These two trials used the currently recommended dosing regimen of cimetidine (400 mg h.s.) and ranitidine (150 mg h.s.). A comparison of other dosing regimens has not been studied.

The studied dosing regimens are not equivalent with respect to the degree and duration of acid suppression or suppression of nocturnal acid.

The superiority of ranitidine over cimetidine in these trials indicates that the dosing regimen currently recommended for cimetidine is less likely to be as successful in maintenance therapy.

Convenient once-a-night dose with a
low incidence of side effects³

Headache, sometimes severe, seems to be related to ranitidine administration. Other side effects have been reported; for a complete listing, see the ADVERSE REACTIONS section in the Brief Summary.

No significant interference with the hepatic cytochrome
P-450 enzyme system at recommended doses

ZANTAC 150 mg has no significant drug interactions with theophylline, phenytoin, or warfarin. The bioavailability of certain medications whose absorption is dependent on a low gastric pH may be altered when ZANTAC or other medications that decrease gastric acidity are administered.

Zantac[®] 150
ranitidine HCl/Glaxo 150 mg tablets

One tablet at bedtime
for maintenance

See next page for references and
Brief Summary of Product Information.

Glaxo /  **ROCHE**

CONFIRMED

Zantac 150

ranitidine HCl/Glaxo 150 mg tablets

One tablet at bedtime for maintenance therapy
in healed duodenal ulcer patients

References:

1. Silvis SE, Griffin J, Hardin R, et al: Final report on the United States multicenter trial comparing ranitidine to cimetidine as maintenance therapy following healing of duodenal ulcer. *J Clin Gastroenterol* 1985;7(6):482-487.
2. Gough KR, Korman MG, Bardhan KD, et al: Ranitidine and cimetidine in prevention of duodenal ulcer relapse: A double-blind, randomised, multicentre, comparative trial. *Lancet* 1984;ii:659-662.
3. Data available on request, Glaxo Inc.

ZANTAC[®] 150 Tablets
(ranitidine hydrochloride)
ZANTAC[®] 300 Tablets
(ranitidine hydrochloride)

BRIEF SUMMARY OF PRODUCT INFORMATION

The following is a brief summary only. Before prescribing, see complete prescribing information in ZANTAC[®] product labeling.

INDICATIONS AND USAGE: ZANTAC[®] is indicated in:

1. Short-term treatment of **active duodenal ulcer**. Most patients heal within four weeks.
2. **Maintenance therapy** for duodenal ulcer patients at reduced dosage after healing of acute ulcers.
3. The treatment of **pathological hypersecretory conditions** (eg, Zollinger-Ellison syndrome and systemic mastocytosis).
4. Short-term treatment of **active, benign gastric ulcer**. Most patients heal within six weeks and the usefulness of further treatment has not been demonstrated.
5. Treatment of **gastroesophageal reflux disease (GERD)**. Symptomatic relief commonly occurs within one or two weeks after starting therapy and is maintained throughout a six-week course of therapy.

In active duodenal ulcer; active, benign gastric ulcer; hypersecretory states; and GERD, concomitant antacids should be given as needed for relief of pain.

CONTRAINDICATIONS: ZANTAC[®] is contraindicated for patients known to have hypersensitivity to the drug.

PRECAUTIONS: Symptomatic response to ZANTAC[®] therapy does not preclude the presence of gastric malignancy.

Since ZANTAC is excreted primarily by the kidney, dosage should be adjusted in patients with impaired renal function (see **DOSAGE AND ADMINISTRATION**). Caution should be observed in patients with hepatic dysfunction since ZANTAC is metabolized in the liver.

False positive tests for urine protein with Multistix[®] may occur during ZANTAC therapy, and therefore testing with sulfosalicylic acid is recommended.

Although recommended doses of ZANTAC do not inhibit the action of cytochrome P-450 enzymes in the liver, there have been isolated reports of drug interactions which suggest that ZANTAC may affect the bioavailability of certain drugs by some mechanism as yet unidentified (eg, a pH-dependent effect on absorption or a change in volume of distribution).

Lack of experience to date precludes recommending ZANTAC for use in children or pregnant patients. Since ZANTAC is secreted in human milk, caution should be exercised when administered to a nursing mother.

ADVERSE REACTIONS: Headache, sometimes severe, seems to be related to ZANTAC[®] administration. Constipation, diarrhea, nausea, vomiting, and abdominal discomfort/pain have been reported. There have been rare reports of malaise, dizziness, somnolence, insomnia, vertigo, tachycardia, bradycardia, premature ventricular beats, and arthralgias. Rare cases of reversible mental confusion, agitation, depression, and hallucinations have been reported, predominantly in severely ill elderly patients.

In normal volunteers, SGPT values were increased to at least

twice the pretreatment levels in 6 of 12 subjects receiving 100 mg qid IV for seven days, and in 4 of 24 subjects receiving 50 mg qid for five days. With oral administration there have been occasional reports of reversible hepatitis, hepatocellular or hepatocanalicular or mixed, with or without jaundice.

There have been rare reports of reversible leukopenia, granulocytopenia, thrombocytopenia, and pancytopenia.

Although controlled studies have shown no antiandrogenic activity, occasional cases of gynecomastia, impotence, and loss of libido have been reported in male patients receiving ZANTAC, but the incidence did not differ from that in the general population.

Incidents of rash, including rare cases suggestive of mild erythema multiforme, and, rarely, alopecia, have been reported, as well as rare cases of hypersensitivity reactions (eg, bronchospasm, fever, rash, eosinophilia) and small increases in serum creatinine.

OVERDOSAGE: Information concerning possible overdose and its treatment appears in the full prescribing information.

DOSAGE AND ADMINISTRATION Active Duodenal Ulcer: The current recommended adult oral dosage is 150 mg twice daily. An alternate dosage of 300 mg once daily at bedtime can be used for patients in whom dosing convenience is important. The advantages of one treatment regimen compared to the other in a particular patient population have yet to be demonstrated.

Maintenance Therapy: The current recommended adult oral dosage is 150 mg at bedtime.

Pathological Hypersecretory Conditions (such as Zollinger-Ellison Syndrome): The current recommended adult oral dosage is 150 mg twice a day. In some patients it may be necessary to administer ZANTAC 150-mg doses more frequently. Doses should be adjusted to individual patient needs, and should continue as long as clinically indicated. Doses up to 6 g/day have been employed in patients with severe disease.

Benign Gastric Ulcer: The current recommended adult oral dosage is 150 mg twice a day.

GERD: The current recommended adult oral dosage is 150 mg twice a day.

Dosage Adjustment for Patients with Impaired Renal Function: On the basis of experience with a group of subjects with severely impaired renal function treated with ZANTAC, the recommended dosage in patients with a creatinine clearance less than 50 mL/min is 150 mg every 24 hours. Should the patient's condition require, the frequency of dosing may be increased to every 12 hours or even further with caution. Hemodialysis reduces the level of circulating ranitidine. Ideally, the dosage schedule should be adjusted so that the timing of a scheduled dose coincides with the end of hemodialysis.

HOW SUPPLIED: ZANTAC[®] 300 Tablets (ranitidine hydrochloride equivalent to 300 mg of ranitidine) are yellow, capsule-shaped tablets embossed with "ZANTAC 300" on one side and "Glaxo" on the other. They are available in bottles of 30 (NDC 0173-0393-40) and unit dose packs of 100 tablets (NDC 0173-0393-47).

ZANTAC[®] 150 Tablets (ranitidine hydrochloride equivalent to 150 mg of ranitidine) are white tablets embossed with "ZANTAC 150" on one side and "Glaxo" on the other. They are available in bottles of 60 tablets (NDC 0173-0344-42) and unit dose packs of 100 tablets (NDC 0173-0344-47).

Store between 15° and 30° C (59° and 86° F) in a dry place. Protect from light. Replace cap securely after each opening.

© Copyright 1983, Glaxo Inc. All rights reserved. October 1986

Glaxo

Glaxo Inc.
Research Triangle Park, NC 27709

PHYSICIAN'S RECOGNITION AWARD

The American Medical Association understands how valuable your time is. We know there aren't enough hours in the day for doctors to do everything they want to do for their patients, community, family, friends, and themselves.

That's why we appreciate the efforts of many physicians to continue their medical education. These dedicated physicians find the time to expand their knowledge and

improve their skills through continuing medical education.

In recognition of this continued achievement, the AMA is pleased to offer the *Physician's Recognition Award*. Displayed on the walls of your office or home, it is a symbol of your commitment to providing the best medical care possible.

You will be receiving an application for the *Physician's Recognition Award* in the mail shortly. We encourage you to participate in this program.



AMA News Notes

(continued from page 18A)

Copies of the tape are available for \$35 for a half-inch VHS videotape and \$555 for a three-quarter-inch videotape. Copies are available from LACMA, Communications Dept., 1925 Wilshire Blvd., Los Angeles, Calif. 90057.

* * *

Dutch-language edition of the *Journal of the American Medical Association* is now being published. *JAMA* now is published on a monthly, bimonthly, or quarterly basis in six other foreign languages; English-language editions are being published in Korea and nine countries in Southeast Asia.

* * *

The AMA Dept. of Public Health is urging physicians to include the use of tobacco products as a contributing factor on death certificates when clinically appropriate.

Alan Engelberg, M.D., who heads the department, noted that the AMA House of Delegates had adopted the "death certificate" policy at its Interim Meeting in December, 1986. The information on death certificates is coded for computerization by state or local health officials using the *International Classification of Diseases* (ICD-9).

Dr. Engelberg said the directory included a code for what it calls "tobacco abuse" or "smoker's syndrome".

* * *

James H. Sammons, M.D., AMA executive vice president, took advantage of an opportunity offered by the *Washington Post* to present the AMA's proposal for improving Medicare. The *Post* had chided the AMA for filing suit against implementation of new rules for participation in Medicare.

If the AMA didn't like the proposed solution to Medicare budgeting problems, where was its plan? the *Post* asked.

Responded Dr. Sammons, "We welcome the opportunity offered by your recent editorial to discuss the AMA plan for improving Medicare."

Offering salient points from Board of Trustee Report MM, "A Proposal for Financing Health Care of the Elderly," adopted in June, 1986, Dr. Sammons emphasized that Medicare always was intended to offer the benefits of a private care system within the framework of a publically funded program. Budget constraints have made this difficult, and report MM offers a workable solution, he said.

* * *

In the meantime, AMA lobbyists are continuing their meetings with Washington-based medical specialty society representatives to carry out a coordinated strategy of resistance to inclusion of radiologists, anesthesiologists, and pathologists in a Medicare DRG price system.

* * *

The AMA restricted its comment on the administration budget proposals to criticism of inclusion of radiologists, anesthesiologists, and pathologists in diagnosis-related groups. Said Dr. Sammons: "The minuscule savings which might be realized is insignificant when weighed against the substantial threat to quality of care to patients. The AMA will use every possible means to defeat this proposal.

* * *

The long-awaited final report of the Health Policy Agenda for the American People officially will be released in Washington, D.C. on Feb. 24 where its vital potential contribution in spurring the development of orderly, long-term policies for the nation will be emphasized in a national press conference.

The report which took five years of intensive study to develop, is the consensus product of 172 national groups representing health, health-related organizations, business, government and consumer interests. It contains 195 specific recommendations for guiding the nation's health care policy.

Among the special activities being planned for Feb. 24 is the formal presentation of the report to key Members of Congress.

This will be followed by a press conference to focus media, opinion leader and public attention on the HPA.

(Continued on page 31-A)

Motrin[®] 800 TABLETS mg

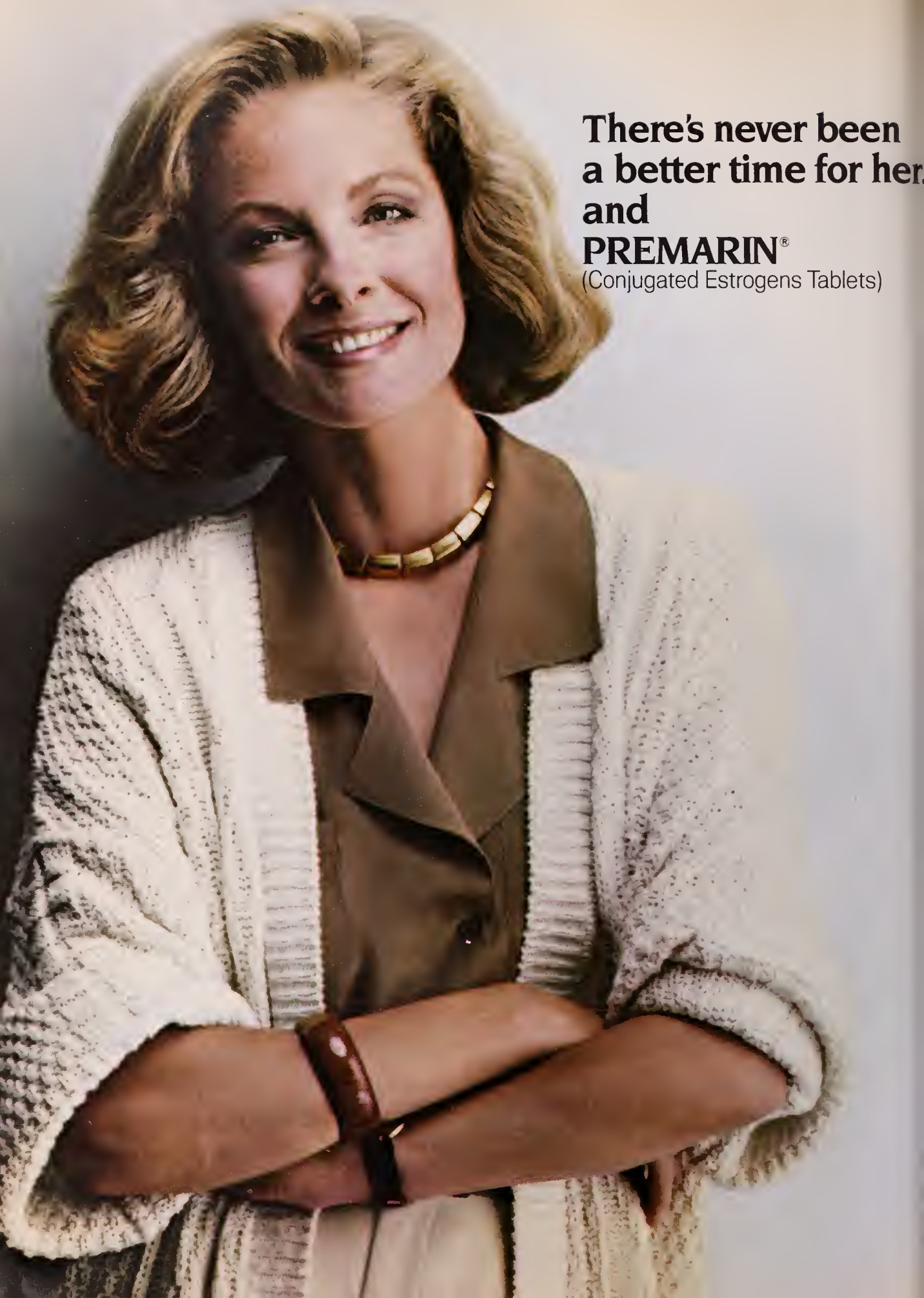
ibuprofen



Extra strength
Convenience
Economy



A Century
of Caring
1886-1986



There's never been
a better time for her
and
PREMARIN[®]
(Conjugated Estrogens Tablets)

Now the evidence looks better than ever

Significantly reduced risk of endometrial hyperplasia

Endometrial hyperplasia was significantly reduced when progestin was added to PREMARIN therapy for more than ten days a month.¹⁻⁴ The risk of endometrial hyperplasia may also be reduced through cyclic administration of unopposed, low-dose PREMARIN.

Effect on lipids—an important feature

PREMARIN used alone does not adversely affect lipid levels. In fact, a clinical study has shown a significant increase in HDL cholesterol—from 49.7 mg/dL to 56.4 mg/dL—and decrease in LDL cholesterol—from 165.1 mg/dL to 138.1 mg/dL—after one year of therapy with PREMARIN, 0.625 mg.⁵

Low-dose control of menopausal symptoms*

PREMARIN effectively relieves vasomotor symptoms, such as hot flashes. When estrogen deficiency is limited to atrophic vaginitis, PREMARIN® (conjugated estrogens) Vaginal Cream restores the vaginal environment to its premenopausal state.

The most widely used, most extensively studied estrogen worldwide.

PREMARIN®
(Conjugated Estrogens Tablets)

Most trusted for more reasons

*PREMARIN is indicated for moderate-to-severe vasomotor symptoms.

Please see following page for brief summary of prescribing information.

For moderate-to-severe
vasomotor symptoms

PREMARIN® (Conjugated Estrogens Tablets)



0.3 mg 0.625 mg 0.9 mg 1.25 mg 2.5 mg

The appearance of these tablets is a trademark of Ayerst Laboratories.

BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION AND PATIENT INFORMATION, SEE PACKAGE CIRCULARS.)

PREMARIN® Brand of conjugated estrogens tablets, USP

PREMARIN® Brand of conjugated estrogens Vaginal Cream in a nonfluorinating base

1 ESTROGENS HAVE BEEN REPORTED TO INCREASE THE RISK OF ENDOMETRIAL CARCINOMA

Three independent case control studies have reported an increased risk of endometrial cancer in postmenopausal women exposed to exogenous estrogens for more than one year. This risk was independent of the other known risk factors for endometrial cancer. These studies are further supported by the finding that incidence rates of endometrial cancer have increased sharply since 1969 in eight different areas of the United States with population-based cancer reporting systems, an increase which may be related to the rapidly expanding use of estrogens during the last decade. The three case control studies reported that the risk of endometrial cancer in estrogen users was about 4.5 to 13.9 times greater than in nonusers. The risk appears to depend on both duration of treatment and on estrogen dose. In view of these findings, when estrogens are used for the treatment of menopausal symptoms, the lowest dose that will control symptoms should be utilized and medication should be discontinued as soon as possible. When prolonged treatment is medically indicated, the patient should be reassessed on at least a semiannual basis to determine the need for continued therapy. Although the evidence must be considered preliminary, one study suggests that cyclic administration of low doses of estrogen may carry less risk than continuous administration; it therefore appears prudent to utilize such a regimen. Close clinical surveillance of all women taking estrogens is important. In all cases of undiagnosed persistent or recurring abnormal vaginal bleeding, adequate diagnostic measures should be undertaken to rule out malignancy. There is no evidence at present that "natural" estrogens are more or less hazardous than "synthetic" estrogens at equiestrogenic doses.

2 ESTROGENS SHOULD NOT BE USED DURING PREGNANCY

The use of female sex hormones, both estrogens and progestogens, during early pregnancy may seriously damage the offspring. It has been shown that females exposed in utero to diethylstilbestrol, a non-steroidal estrogen, have an increased risk of developing in later life a form of vaginal or cervical cancer that is ordinarily extremely rare. This risk has been estimated as not greater than 4 per 1,000 exposures. Furthermore, a high percentage of such exposed women (from 30% to 90%) have been found to have vaginal adenosis, epithelial changes of the vagina and cervix. Although these changes are histologically benign, it is not known whether they are precursors of malignancy. Although similar data are not available with the use of other estrogens, it cannot be presumed they would not induce similar changes. Several reports suggest an association between intrauterine exposure to female sex hormones and congenital anomalies, including congenital heart defects and limb reduction defects. One case control study estimated a 4.7-fold increased risk of limb reduction defects in infants exposed in utero to sex hormones (oral contraceptives, hormone withdrawal tests for pregnancy, or attempted treatment for threatened abortion). Some of these exposures were very short and involved only a few days of treatment. The data suggest that the risk of limb reduction defects in exposed fetuses is somewhat less than 1 per 1,000. In the past, female sex hormones have been used during pregnancy in an attempt to treat threatened or habitual abortion. There is considerable evidence that estrogens are ineffective for these indications, and there is no evidence from well controlled studies that progestogens are effective for these uses. If PREMARIN is used during pregnancy, or if the patient becomes pregnant while taking this drug, she should be apprised of the potential risks to the fetus, and the advisability of pregnancy continuation.

DESCRIPTION: PREMARIN (conjugated estrogens, USP) contains a mixture of estrogens, obtained exclusively from natural sources, blended to represent the average composition of material derived from pregnant mares' urine. It contains estrone, equilin, and 17 α -dihydroequilin, together with smaller amounts of 17 α -estradiol, equilin, and 17 α -dihydroequilin as salts of their sulfate esters. Tablets are available in 0.3 mg, 0.625 mg, 0.9 mg, 1.25 mg, and 2.5 mg strengths of conjugated estrogens. Cream is available as 0.625 mg conjugated estrogens per gram.

INDICATIONS AND USAGE: PREMARIN (conjugated estrogens tablets, USP): Moderate-to-severe vasomotor symptoms associated with the menopause. (There is no evidence that estrogens are effective for nervous symptoms or depression without associated vasomotor symptoms and they should not be used to treat such conditions.) **Osteoporosis (abnormally low bone mass).** Atrophic vaginitis. Kraurosis vulvae. Female castration.

PREMARIN (conjugated estrogens) Vaginal Cream is indicated in the treatment of atrophic vaginitis and kraurosis vulvae. PREMARIN HAS NOT BEEN SHOWN TO BE EFFECTIVE FOR ANY PURPOSE DURING PREGNANCY AND ITS USE MAY CAUSE SEVERE HARM TO THE FETUS (SEE BOXED WARNING).

Concomitant Progestin Use: The lowest effective dose appropriate for the specific indication should be utilized. Studies of the addition of a progestin for 7 or more days of a cycle of estrogen administration have reported a lowered incidence of endometrial hyperplasia. Morphological and biochemical studies of the endometrium suggest that 10 to 13 days of progestin are needed to provide maximal maturation of the endometrium and to eliminate any hyperplastic changes. Whether this will provide protection from endometrial carcinoma has not been clearly established. There are possible additional risks which may be associated with the inclusion of progestin in estrogen replacement regimens. (See PRECAUTIONS.) The choice of progestin and dosage may be important; product labeling should be reviewed to minimize possible adverse effects.

CONTRAINDICATIONS: Estrogens should not be used in women (or men) with any of the following conditions: 1. Known or suspected cancer of the breast except in appropriately selected patients being treated for metastatic disease. 2. Known or suspected estrogen-dependent neoplasia. 3. Known or suspected pregnancy (See Boxed Warning). 4. Undiagnosed abnormal genital bleeding. 5. Active thrombophlebitis or thromboembolic disorders. 6. A past history of thrombophlebitis, thrombosis, or thromboembolic disorders associated with previous estrogen use (except when used in treatment of breast or prostatic malignancy).

WARNINGS: Long-term continuous administration of natural and synthetic estrogens in certain animal species increases the frequency of carcinomas of the breast, cervix, vagina, and liver. There are now reports that estrogens increase the risk of carcinoma of the endometrium in humans. (See Boxed Warning.) At the present time there is no satisfactory evidence that estrogens given to postmenopausal women increase the risk of cancer of the breast, although a recent study has raised this possibility. There is a need for caution in prescribing estrogens for women with a strong family history of breast cancer or who have breast nodules, fibrocystic disease, or abnormal mammograms. A recent study has reported a 2- to 3-fold increase in the risk of surgically confirmed gallbladder disease in women receiving postmenopausal estrogens.

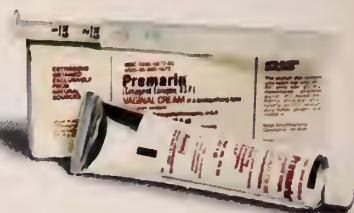
Adverse effects of oral contraceptives may be expected at the larger doses of estrogen used to treat prostatic or breast cancer or postpartum breast engorgement; it has been shown that there is an increased risk of thrombosis in men receiving estrogens for prostatic cancer and women for postpartum breast engorgement. Users of oral contraceptives have an increased risk of diseases, such as thrombophlebitis, pulmonary embolism, stroke, and myocardial infarction. Cases of retinal thrombosis, mesenteric thrombosis, and optic neuritis have been reported in oral contraceptive users. An increased risk of postsurgery thromboembolic complications has also been reported in users of oral contraceptives. If feasible, estrogen should be discontinued at least 4 weeks before surgery of the type associated with an increased risk of thromboembolism, or during periods of prolonged immobilization. Estrogens should not be used in persons with active thrombophlebitis, thromboembolic disorders, or in persons with a history of such disorders in association with estrogen use. They should be used with

For atrophic vaginitis

PREMARIN® (Conjugated Estrogens)

Vaginal
Cream

0.625mg/g



caution in patients with cerebral vascular or coronary artery disease. Large doses (5 mg conjugated estrogens per day), comparable to those used to treat cancer of the prostate and breast, have been shown to increase the risk of nonfatal myocardial infarction, pulmonary embolism and thrombophlebitis. When doses of this size are used, any of the thromboembolic and thrombotic adverse effects should be considered a clear risk.

Benign hepatic adenomas should be considered in estrogen users having abdominal pain and tenderness, abdominal mass, or hypovolemic shock. Hepatocellular carcinoma has been reported in women taking estrogen-containing oral contraceptives. Increased blood pressure may occur with use of estrogens in the menopause and blood pressure should be monitored with estrogen use. A worsening of glucose tolerance has been observed in patients on estrogen-containing oral contraceptives. For this reason, diabetic patients should be carefully observed. Estrogens may lead to severe hypercalcemia in patients with breast cancer and bone metastases.

PRECAUTIONS: Physical examination and a complete medical and family history should be taken prior to the initiation of any estrogen therapy with special reference to blood pressure, breasts, abdomen, and pelvic organs, and should include a Papanicolaou smear. As a general rule, estrogen should not be prescribed for longer than one year without another physical examination being performed. Conditions influenced by fluid retention such as asthma, epilepsy, migraine, and cardiac or renal dysfunction, require careful observation. Certain patients may develop manifestations of excessive estrogenic stimulation, such as abnormal or excessive uterine bleeding, mastodynia, etc. Prolonged administration of unopposed estrogen therapy has been reported to increase the risk of endometrial hyperplasia in some patients. Oral contraceptives appear to be associated with an increased incidence of mental depression. Patients with a history of depression should be carefully observed. Preexisting uterine leiomyoma may increase in size during estrogen use. The pathologist should be advised of estrogen therapy when relevant specimens are submitted. If jaundice develops in any patient receiving estrogen, the medication should be discontinued while the cause is investigated. Estrogens should be used with care in patients with impaired liver function, renal insufficiency, metabolic bone diseases associated with hypercalcemia, or in young patients in whom bone growth is not complete. If concomitant progestin therapy is used, potential risks may include adverse effects on carbohydrate and lipid metabolism.

The following changes may be expected with larger doses of estrogen.

- Increased sulfobromophthalen retention.
- Increased prothrombin and factors VII, VIII, IX, and X; decreased antithrombin 3; increased norepinephrine-induced platelet aggregability.
- Increased thyroid binding globulin (TBG) leading to increased circulating total thyroid hormone, as measured by T₄ by column, or T₄ by radioimmunoassay. Free T₃ resin uptake is decreased, reflecting the elevated TBG; free T₄ concentration is unaltered.
- Impaired glucose tolerance.
- Decreased pregnandiol excretion.
- Reduced response to metyrapone test.
- Reduced serum folate concentration.
- Increased serum triglyceride and phospholipid concentration. As a general principle, the administration of any drug to nursing mothers should be done only when clearly necessary since many drugs are excreted in human milk.

ADVERSE REACTIONS: The following have been reported with estrogenic therapy, including oral contraceptives: breakthrough bleeding, spotting, change in menstrual flow, dysmenorrhea, premenstrual-like syndrome, amenorrhea during and after treatment, increase in size of uterine fibromyoma; vaginal candidiasis; change in cervical erosion and in degree of cervical secretion; cystitis-like syndrome; tenderness, enlargement, secretion (of breasts); nausea, vomiting, abdominal cramps, bloating; cholestatic jaundice; chloasma or melasma which may persist when drug is discontinued; erythema multiforme; erythema nodosum; hemorrhagic eruption; loss of scalp hair; hirsutism; steepening of corneal curvature; intolerance to contact lenses; headache, migraine, dizziness, mental depression, chorea; increase or decrease in weight; reduced carbohydrate tolerance; aggravation of porphyria; edema; changes in libido.

ACUTE OVERDOSSAGE: May cause nausea, and withdrawal bleeding may occur in females.

DOSEAGE AND ADMINISTRATION:

PREMARIN® Brand of conjugated estrogens tablets, USP

- Given cyclically for short-term use only. For treatment of moderate to severe vasomotor symptoms, atrophic vaginitis, or kraurosis vulvae associated with the menopause (0.3 to 1.25 mg or more daily). The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible. Administration should be cyclic (eg, three weeks on and one week off). Attempts to discontinue or taper medication should be made at three- to six-month intervals.
- Given cyclically. Female castration. Osteoporosis. Female castration—1.25 mg daily, cyclically. Adjust upward or downward according to response of the patient. For maintenance, adjust dosage to lowest level that will provide effective control. Osteoporosis—0.625 mg daily. Administration should be cyclic (eg, three weeks on and one week off).

Patients with an intact uterus should be monitored for signs of endometrial cancer and appropriate measures taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

PREMARIN® Brand of conjugated estrogens Vaginal Cream

Given cyclically for short-term use only. For treatment of atrophic vaginitis or kraurosis vulvae.

The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible.

Administration should be cyclic (eg, three weeks on and one week off).

Attempts to discontinue or taper medication should be made at three- to six-month intervals.

Usual dosage range: 2 to 4 g daily, intravaginally, depending on the severity of the condition.

Treated patients with an intact uterus should be monitored closely for signs of endometrial cancer and appropriate diagnostic measures should be taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

References:

- Whitehead MI, Townsend PT, Pryse-Owies J, et al: Effects of estrogens and progestins on the biochemistry and morphology of the postmenopausal endometrium. *N Engl J Med* 1981;305:1599-1605.
- Paterson MEL, Wade-Evans T, Sturdee DW, et al: Endometrial disease after treatment with estrogens and progestogens in the climacteric. *Br Med J* 1980;280:822-824.
- Magos AL, Brincat M, Studd JWW, et al: Amenorrhea and endometrial atrophy with continuous oral estrogen and progestogen therapy in postmenopausal women. *Obstet Gynecol* 1985;67:496-499.
- Whitehead MI, Lane G, Siddie N, et al: Avoidance of endometrial hyperstimulation in estrogen-treated postmenopausal women. *Semin Reprod Endocrinol* 1983;1:41-52.
- Barnes RB, Roy S, Lobo RA: Comparison of lipid and androgen levels after conjugated estrogen or depo-medroxyprogesterone acetate treatment in postmenopausal women. *Obstet Gynecol* 1985;66:216-219.

© 1986 Ayerst Laboratories

Ayerst®

AYERST LABORATORIES
New York, NY 10017

T6194/886

THE NEBRASKA MEDICAL JOURNAL

The Keeper of the King's Rectum

WE know today from the writings of Roman and Greek historians, and from various papyri and hieroglyphics on temple walls, that medicine in ancient Egypt was at the epitome of the state-of-the art at that period. Treatises on pharmacology, anatomy and surgery, along with incantations and charms, filled the well-known papyri of Ebers, Herst, Beatty and others. The practitioners of the healing art were expected to have knowledge of all types of medicine; however, they each specialized in the care of one or two body organs as suggested by the writings of Herodotus, the Greek historian in the fifth century B.C. "Medicine with them is distributed in the following ways: Every physician is for one disease, not for several, and the whole country is full of physicians of the eyes, others of the head, others of the teeth, others of the belly and others of obscure diseases." Sounds familiar? His description remains true today as it was thousands of years ago. Medicine has come a full circle!

The Ancients' reason for concentrating on a limited field of expertise could be due to the otherwise impossible feat of attempting to learn all the medical knowledge in the writings of the Hermetic Collection. The forty two sacred books in the collection were allegedly given to mankind by the god Thoth - later changed to Hermes by the Greeks - and were said to contain universal knowledge.

The physicians in ancient Egypt were a privileged class with social status and rank.

Alexander N. Kingsley, M.D., F.A.C.S.
Colon & Rectal Institute of Nebraska,
Lincoln, Nebraska

However, they were part of a rigid hierarchy. The Court College of Physicians set the standard of training and of practice, and was comprised of Chief Physicians, supervisors and inspectors. The majority of physicians belonged to the lower order of "physicians to the workers" - the miners, the builders and the soldiers. A lesser group of "Temple physicians" tended to the general populace and the serfs. At the apex of the hierarchy stood Pharaoh's physician with the supreme rank of "The Keeper of the King's Rectum". She specialized in the care of teeth and of the anorectum. The legendary physician Imhotep (Deified after his death) occupied this exalted position, so did Iry and Hawi, both prominent physicians in their own right.

The wisdom of the Ancients has permeated through the centuries, and it seems true today as it was several millenia ago that rulers have a tendency for anal afflictions. "*Plus ca change plus c'est la meme chose*" (The more things change the more they remain the same).

Operations for Variceal Hemorrhage: A Single Surgeon's Experience

MULTIPLE operations have been proposed for management of variceal hemorrhage.¹ All of these procedures can be placed into one of three groups: 1) nonselective shunts which eliminate hepatic portal perfusion; 2) selective shunts which preserve portal blood flow to the liver; and 3) nonshunting operations which either obliterate varices or interrupt collateral pathways to them. Nonselective shunts can be further sub-classified into end-to-side portacaval shunt and several varieties of side-to-side portosystemic shunts.

Although each of these procedures has had its avid supporters, we have maintained that no single operation is applicable to all patients.² Rather, the choice of operative procedure for variceal bleeding should be based on certain clinical considerations and on results of preoperative hemodynamic studies. The purpose of this report is to describe our experience with these various operations since 1978 and to analyze overall morbidity and mortality when a selective approach is applied to this problem.

Methods

Since January 1978, 165 patients have been operated on by a single surgeon (LFR). Between January 1978 and August 1984, 145 patients were treated at the University of Utah Medical Center (96 patients) and the Salt Lake Veterans Administration Medical Center (49 patients) and from August 1984 through December 1985, 20 patients have undergone surgery at the University of Nebraska Medical Center (13 patients) and the Omaha Veterans Administration Medical Center (7 patients). Variceal hemorrhage was endoscopically documented in all patients. The cause of variceal hemorrhage was alcoholic cirrhosis in 108 patients (65%), nonalcoholic cirrhosis in 48 patients (29%), and noncirrhotic portal hypertension in 9 patients (6%).

When patients were admitted with active variceal hemorrhage, they underwent conservative treatment consisting of vasopressin

LAYTON F. RIKKERS, M.D.*

ROBERT A. CORMIER, R.N.

Department of Surgery, University of Nebraska Medical Center

infusion, balloon tamponade, and endoscopic sclerotherapy as needed so that surgery could be performed electively. These nonoperative techniques failed to control hemorrhage in 31 patients (19%), who then underwent emergency surgery.

Most patients received a detailed preoperative evaluation including assessment of hepatic function, hepatic hemodynamic status, and cerebral function. Nearly all patients have been followed postoperatively at intervals either in the clinic or by telephone; only 3 patients have been lost to follow-up. Severity of liver disease was graded by a modified Child's classification consisting of serum albumin, total bilirubin, ascites status, and degree of encephalopathy.³ Only moderate and severe encephalopathy, which required hospitalization and chronic protein restriction plus lactulose therapy, were considered.

Hepatic hemodynamics were assessed by visceral angiography, which was obtained preoperatively and in the early postoperative interval in most patients. An angiographic study consisted of selective superior mesenteric, splenic, and hepatic arterial injections, left renal vein opacification, and measurement of corrected sinusoidal pressure (hepatic venous wedge pressure minus free hepatic vein pressure). These studies were useful in defining splanchnic venous anatomy, shunt status postoperatively, and degree of hepatic portal

*Reprint requests: Layton F. Rikkers, M.D., Professor and Chairman, Department of Surgery, University of Nebraska Medical Center, 42nd & Dewey Ave., Omaha, NE 68105.

perfusion. The portal perfusion grade was qualitatively assessed from the venous phase of the superior mesenteric arterial injection and scored from one (good perfusion) to four (absent perfusion).⁴

Selection of Operative Procedure

The following operations were performed: distal splenorenal shunt (105 patients), non-selective shunts (46 patients), and nonshunting operations (14 patients). The nonselective shunt group included 20 end-to-side portacaval shunts and 26 side-to-side portosystemic shunts (10 side-to-side portacaval shunts and 16 interposition H-graft shunts.). The distal splenorenal shunt was selected for individuals with portal flow towards the liver on preoperative angiography, a splenic vein of sufficient diameter (> 7mm) and approximation to the left renal vein, and either absent ascites or ascites responsive to medical management. The distal splenorenal shunt was performed as an emergency in 8 patients (8%). A nonselective shunt was chosen for patients with absent or spontaneous reversal of hepatic portal flow, ascites not responsive to medical therapy, urgency of surgery preventing preoperative angiography, or anatomy incompatible with construction of a distal splenorenal shunt. Nineteen nonselective shunts (41%) were performed as emergencies. The nonshunting procedure used consisted of splenectomy and extensive proximal gastric and distal esophageal devascularization. In 2 patients, distal esophageal transection and reanastomosis with the EEA stapler was also done. A nonshunting

procedure was selected for patients with diffuse splanchnic venous thrombosis, severe hypersplenism, or anatomy incompatible with construction of a distal splenorenal shunt.

Significant differences between operative groups were determined by chi-square analysis and the unpaired Student's t test. Differences between preoperative and postoperative hemodynamic variables within a group were analyzed by the paired Student's t test. Survival analysis was done by the method of Kaplan and Meier.⁵

Results

The preoperative characteristics of the three operative groups are presented in Table 1. Since a nonselective shunt was generally used in the emergency setting and in patients with absent hepatic portal perfusion and/or medically intractable ascites, this operative group contained the largest percentage of patients with advanced or decompensated liver disease (Child's C).

Operative mortality was defined as death occurring during the same hospitalization as the operation or within 30 days of surgery for discharged patients. Operative mortality rates for the three operative groups and the various Child's classes are presented in Table 2. Early postoperative death was closely related to Child's class. Notably, none of the 59 Child's A patients in this series died during the early postoperative interval. Operative mortality rates for emergency and elective operations were 35% and 7%, respectively. Two (10%) of

Table 1
Preoperative Data

	<u>All (165)</u>	<u>DSRS (105)</u>	<u>NSS (46)</u>	<u>NS (14)</u>
Alcoholic Cirrhosis	65%	64%	80%	21%
Child's C	20%	11%	43%	14%
Mod-Severe PSE	8%	4%	15%	14%
Emerg. Surg.	19%	8%	41%	29%

() = number of patients

DSRS = Distal splenorenal shunt
NSS = Nonselective shunt
NS = Nonshunting operation
PSE = Portosystemic encephalopathy

the Nebraska patients died within 30 days of surgery. Both of these patients were Child's class C and one of them was done as an emergency.

Kaplan-Meier survival analyses are presented in Table 3. Mean follow-up for all surviving patients is 44.3 months. Median survivals for nonshunting procedures and Child's A patients could not be calculated because more than 50% of patients in these groups remain alive. Survival following distal splenorenal shunt was significantly ($p < .001$) longer than after non-selective shunts. Although not significantly different from the distal splenorenal shunt group, survival was greatest in the nonshunting

group, probably because it contained most of the noncirrhotic patients. Survival rates were significantly different among the three Child's classes ($p < .001$), but were similar in alcoholic and nonalcoholic patient groups. Seventeen of the 20 Nebraska patients (85%) are still surviving at a mean follow-up of 8 months.

Morbidity following the various operative procedures is shown in Table 4. Seven percent of the 151 shunt patients occluded their shunts as shown by angiography or autopsy. A similar percentage of distal splenorenal and non-selective shunts thrombosed. The frequency of recurrent variceal hemorrhage was significant-

Table 2
Operative Mortality

	Total	Child's		
		A (59)	B (73)	C (33)
All patients (165)	12%	0	11%	33%
DSRS (105)	6%	0	10%	18%
NSS (46)	28%	0	18%	45%
NS (14)	0	0	0	0

() = number of patients

DSRS = Distal splenorenal shunt

NSS = Nonselective shunt

NS = Nonshunting operation

Table 3
Long-Term Survival

Group	N	Median Survival (months)	5-Year Survival (%)
All patients	165	50 $\pm$ 2	43
DSRS	105	50 $\pm$ 3	46*
NSS	46	18 $\pm$ 4	22*
NS	14	-	68
Child's A	59	-	57*
Child's B	73	43 $\pm$ 4	51*
Child's C	33	13 $\pm$ 4	8*
Alcoholic	108	50 $\pm$ 3	41
Nonalcoholic	57	36 $\pm$ 4	41

* $p < .001$

Data presented as mean $\pm$ SEM

DSRS = Distal splenorenal shunt

NSS = Nonselective shunt

NS = Nonshunting operation

ly greater following nonshunting procedures (50%) than after either the distal splenorenal shunt (12%; $p < .001$) or nonselective shunts (7%; $p < .001$). Moderate to severe encephalopathy was most frequent following nonselective shunts 42%; $p < .001$ compared to both distal splenorenal shunt and nonshunting procedures). Early postoperative ascites severe enough to delay discharge was most common following the distal splenorenal shunt (23%) but was not significantly more frequent following this procedure than after nonselective shunts or nonshunting procedures.

Preoperative to postoperative changes in angiographic portal perfusion grade and corrected sinusoidal pressure for the two types of shunting procedures are summarized in Table 5. Both portal perfusion grade and corrected sinusoidal pressure were maintained following the distal splenorenal shunt, whereas the patent nonselective shunts resulted in complete diversion of portal flow (portal perfusion grade = 4) and significant decompression of the splanchnic venous system. Continuing portal

blood flow to the liver was present on the venous phase of the postoperative superior mesenteric angiogram in 88% of patients after the distal splenorenal shunt. Absence of portal flow in the early postoperative period following this procedure was usually due to complete portal vein thrombosis (9 patients).

Discussion

What operation is best for patients who bleed from esophageal varices has long been debated. The underlying premise of this series is that no single operation is ideal for all patients and that overall results might be improved by selecting the procedure based on each individual's portal hemodynamic status and clinical circumstances. Another basic tenet of the authors is that because of the high operative mortality rate that results from routine emergency surgery,⁶ elective operations should be performed whenever possible. In a previous study,⁷ we have shown that hepatic function can be significantly improved when an interval of medical management precedes elective surgery. Applying this

Table 4
Postoperative Morbidity

	<u>All (165)</u>	<u>DSRS (105)</u>	<u>NSS (46)</u>	<u>NS (14)</u>
Occluded Shunt	7%	8%	7%	-
Recurrent Hemorrhage	14%	12%	7%	50%*
Mod-Severe PSE	17%	10%	42%*	14%
Marked Ascites	20%	23%	15%	14%

* $p < .001$

() = number of patients

DSRS = Distal splenorenal shunt
NSS = Nonselective shunt
NS = Nonshunting operation
PSE = Portosystemic encephalopathy

Table 5
Effect of Patent Shunts on Hepatic Hemodynamics

<u>Variable</u>	<u>n</u>	<u>Distal Splenorenal Shunt</u>		<u>n</u>	<u>Nonselective Shunts</u>	
		<u>preop</u>	<u>postop</u>		<u>preop</u>	<u>postop</u>
Portal perfusion grade	94	2.1 $\pm$ 0.1	2.2 $\pm$ 0.1	23	3.0 $\pm$ 0.2*	4.0 $\pm$ 0.0*
Corrected sinusoidal pressure (mm Hg)	69	17.9 $\pm$ 0.7	17.3 $\pm$ 0.8	12	19.3 $\pm$ 1.8*	12.7 $\pm$ 1.8*

* $p < .001$

Data presented as mean $\pm$ SEM

general approach to patients referred to our surgical service, we have been able to achieve an overall operative mortality of 12% and a median survival of 50 months. The major postoperative complications of recurrent hemorrhage, encephalopathy, and ascites have occurred in 14%, 17%, and 20% of patients, respectively. These overall results compare favorably with other large series consisting of predominantly patients with alcoholic cirrhosis.

When the selection criteria outlined were applied, two-thirds of patients were found to be acceptable candidates for the distal splenorenal shunt. The main advantage of this operation is that it preserves hepatic portal perfusion in many patients and is followed by a lower frequency of encephalopathy than other shunting procedures. Eighty-eight percent of patients undergoing postoperative angiography had continuing portal blood flow to the liver following the distal splenorenal shunt. Only 10% of patients developed moderate to severe postoperative encephalopathy as compared to 42% of patients who developed this complication following totally diverting nonselective shunts. The distal splenorenal shunt was nearly as effective as nonselective shunts in preventing recurrent variceal hemorrhage. Only 8% of distal shunts occluded and 12% of patients developed recurrent variceal hemorrhage. Occasionally, variceal hemorrhage complicated the early postoperative course of patients with patent shunts. However, such bleeding was generally not severe and was confined to the first postoperative month. The most frequent complication after the distal splenorenal shunt was ascites. Postoperative ascites was of sufficient magnitude in 23% of patients to either prolong the hospital course or be a major contributor to early death in six patients. Since the presence of preoperative ascites, which is intractable to medical management, is a good predictor of severe postoperative ascites, such patients are preferably treated with a side-to-side portosystemic shunt rather than a distal splenorenal shunt.

Although the operative mortality rate and frequency of postoperative encephalopathy were highest following nonselective shunts, it should be emphasized that patients receiving these operations had the most advanced liver disease (43% Child's C) and frequently underwent emergency operations (41%). There-

fore, it is impossible to determine the respective contributions of complete diversion of portal flow secondary to the procedure and the progression of liver disease to the relatively poor results in these patients. Hopefully, the availability of endoscopic sclerotherapy will convert some of these emergency cases to elective situations in which a distal splenorenal shunt could be utilized. However, a population of patients will remain that are not suitable for the distal splenorenal shunt and whether these patients will be better served by a nonshunting operation or chronic endoscopic sclerotherapy than by nonselective shunting remains to be determined. A randomized, controlled trial of portosystemic shunt versus chronic sclerotherapy for patients who bleed from varices is presently being conducted at the University of Nebraska to answer this question.

Although nonshunting operations also preserve portal blood flow to the liver and are infrequently complicated by postoperative encephalopathy, they were not commonly utilized in this series because of the high percentage of patients that developed recurrent variceal hemorrhage (50%). Extensive devascularization operations such as the one described by Suguira and Futagawa⁸ in Japan have resulted in excellent survival and infrequent recurrent hemorrhage. However, alcoholic cirrhosis is uncommon in Japan and variceal hemorrhage is usually secondary to either nonalcoholic cirrhosis or noncirrhotic portal hypertension. Utilization of this procedure in North American alcoholic cirrhotics with bleeding varices has been generally unsuccessful. We continue to confine nonshunting operations to the rare individual with portal hypertension and severe hypersplenism, patients with diffuse splanchnic venous thrombosis in whom a shunt is impossible, and individuals with good hepatic portal perfusion and anatomy inconsistent with construction of a distal splenorenal shunt. In all of these situations, a nonshunting operation will be performed only if chronic endoscopic sclerotherapy fails to control hemorrhage.

Although survival was significantly longer for the distal splenorenal shunt group than for the nonselective shunt group, this may have been due to the higher percentage of good risk patients undergoing the distal splenorenal shunt. Both Warren and co-workers⁹ and Zeppa et al.¹⁰ reported in large series that the

distal splenorenal shunt results in longer survival of nonalcoholic cirrhotic patients than of patients with alcoholic cirrhosis. In the present series, the survival curves for non-alcoholic and alcoholic cirrhotics are almost super-imposable. Since most of the nonalcoholic cirrhotics in our study were in the distal splenorenal shunt group, the reasons for the discrepancy in results between our series and these earlier reports are not apparent from analysis of the data.

Summary

Since 1978 we have utilized a selective operative approach for 165 consecutive patients who had bled from esophageal varices. The majority (64%) of patients received the distal splenorenal shunt and 28% and 8% of patients underwent nonselective shunts and nonshunting procedures, respectively. This treatment approach has resulted in an operative mortality rate of 12%, a median survival of 50 months, and postoperative variceal hemorrhage, encephalopathy, and ascites in 14%, 17%, and 20% of patients, respectively. Morbidity and mortality rates have been similar for patients with alcoholic and nonalcoholic cirrhosis. Although overall results have been better with the distal splenorenal shunt than with nonselective shunts, patients selected for

the distal splenorenal shunt had less compromised hepatic function and less advanced portal hypertension.

References

1. Rikkers LF: Operations for management of esophageal variceal hemorrhage (Medical Progress). *West J Med* 136:107-21, 1982.
2. Rikkers LF, Soper NJ, Cormier RA: Selective operative approach for variceal hemorrhage. *Am J Surg* 147:89-96, 1984.
3. Campbell DP, Parker DE, Anagnostopoulos CE: Survival prediction in portacaval shunts: a computerized statistical analysis. *Am J Surg* 126:748-51, 1973.
4. Nordlinger BM, Nordlinger DF, et al: Angiography in portal hypertension: clinical significance in surgery. *Am J Surg* 139:132-41, 1980.
5. Lee ET: Statistical methods for survival data analysis. Belmont, CA: Lifetime Learning Publications, pp. 75-118, 1980.
6. Orloff MJ, Bell RH Jr, et al: Long-term results of emergency portacaval shunt for bleeding esophageal varices in unselected patients with alcoholic cirrhosis. *Ann Surg* 192:325-38, 1980.
7. Holman JM, Rikkers LF: Success of medical and surgical management of acute variceal hemorrhage. *Am J Surg* 140:816-20, 1980.
8. Sugiura M, Futagawa S: Further evaluation of the Sugiura procedure in the treatment of esophageal varices. *Arch Surg* 112:1317-21, 1977.
9. Warren WD, Millikan WJ Jr, et al: Ten years portal hypertension surgery at Emory. *Ann Surg* 195:530-42, 1982.
10. Zeppa R, Hensley GT, et al: The comparative survival of alcoholic versus nonalcoholics after distal splenorenal shunt. *Ann Surg* 187:510-4, 1978.

Advantages in the Early Detection of Diabetic Retinopathy

VISUAL loss is one of the most feared complications of the diabetic patient. In fact, diabetic retinopathy (DR) is the number one cause of new cases of blindness in the United States. Of the approximate 38,000 diabetics in Nebraska, 20% have some degree of visual impairment, 5% of these being either severely visually impaired or blind.¹ Early detection and effective management of diabetic retinopathy has been shown to improve visual prognosis.² It is therefore the responsibility of the physician to recognize initial lesions in the diabetic eye, and to be aware of the effective advances in treatment.

Diabetic retinopathy is primarily a disease of the microvascular circulation supplying the photoreceptive layer of the eye, the retina. The disease is divided into two clinical stages: non-proliferative or background, and proliferative retinopathy (Table I). The earliest recognizable lesions seen on fundusoscopic exam are those of background DR. These consist of microaneurysms, hard exudates, cotton-wool patches, dot-and-blot and flame-shaped hemorrhages (Fig. A). These are all intra-retinal lesions; they do not extend into the vitreous humor. Background retinopathy is the more benign of the two types of DR, as it is slowly progressive and uncommonly associated with blindness, with only 3% of patients becoming blind within 5 years.

On the other hand, proliferative DR proceeds at a faster pace and its complications are much more likely to result in blindness. The term "proliferative" refers to the formation of new vessels on the optic disc and/or retina. This process is known as neovascularization (Fig. B). Because diabetes is a small vessel disease, arteriolar and capillary occlusion results in a hypoxic retina.³ It is proposed that this hypoxic state elaborates a "vasoproliferative factor", resulting in the formation of new vessels on the surface of the retina. These new vessels are fragile, and have a tendency to bleed more easily than normal vessels. Vision

IRA A. PRILUCK, M.D.*

WILLIAM R. DEL MONTE**

MICHAEL H. DAVIDIAN, B.S.M.S.**

Department of Ophthalmology*, Medical Student**,
Creighton University School of Medicine, California,
24th Street, Omaha, NE 68178

threatening complications such as vitreous hemorrhage and retinal detachment result from the involvement of new vessels forming a surrounding fibrous tuft which is pulled upon by retracting vitreous.

Table 1

CLASSIFICATION OF DIABETIC RETINOPATHY WITH ASSOCIATED LESIONS

- A. Non-Proliferative (Background)
 - 1. Microaneurysms
 - 2. Hard Exudates
 - 3. Cotton Wool Patches (Soft Exudates)
 - 4. Dot-and-Blot Hemorrhages
 - 5. Flame-shaped Hemorrhages
 - 6. Intraretinal Microvascular Abnormality
- B. Proliferative
 - 1. Neovascularization
 - a) At the Disc
 - b) Elsewhere
 - 2. Vitreous Hemorrhage
 - 3. Tractional Retinal Detachment

Epidemiological data shows that the incidence of retinopathy increases with the duration of diabetes, poor maintenance of blood sugar levels, and in certain individuals with a genotypic predisposition, specifically HLA-DR4 gene.⁴ Proliferative retinopathy is

*Reprint request: Dr. Ira A. Priluck, Associate Professor and Chariman, Department of Ophthalmology, Saint Joseph Hospital, 601 N. 30th Street, Omaha, NE 68131.

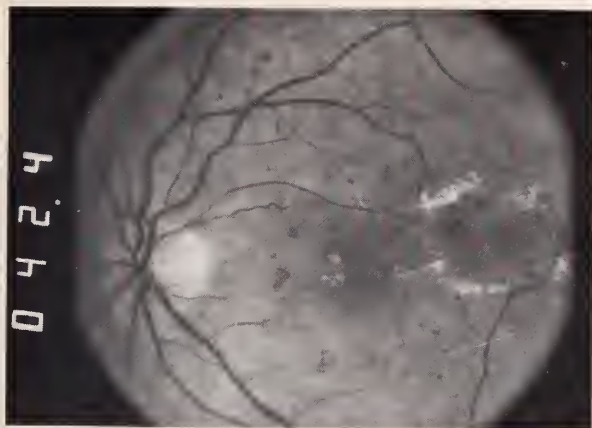


FIGURE A Red free photograph demonstrating background diabetic retinopathy as characterized by dot and blot hemorrhage, microaneurysms, and lipoidal deposits (hard exudates).



FIGURE B Mid venous phase of diagnostic fluorescein angiogram demonstrating proliferative diabetic retinopathy as characterized by extensive neovascularization at the disc.

rare within the first ten years of diabetes.⁵ Klein et al^{6, 7} compared diabetic retinopathy with proliferative disease in those individuals diagnosed as having their onset of diabetes before and after the age of 30 years, as shown in Table 2. This study illustrates the progressive nature of DR and further emphasizes the need for early detection and initiation of proper treatment.

Treatment of DR consists first of the medical control of blood glucose levels. Strict control of blood sugar levels seem to reduce the frequency and delay the onset of DR.^{8,9} However, despite all efforts at obtaining strict metabolic control, DR can eventually still occur. The current mainstay in the treatment of DR is laser photocoagulation. Photocoagula-

tion has multiple uses: to destroy microaneurysms focally, to coagulate local areas of vascular leakage and ischemia, and to destroy principal areas of neovascularization. Pan-retinal photocoagulation is another technique which involves a generalized scatter of laser lesions in an attempt to halt or reduce the amount of vasoproliferative factor released by hypoxic tissue. Statistics prove that this technique markedly decreases the incidence of severe visual loss. One well controlled study showed that four years post-photocoagulation, only 12% of patients suffered severe loss of vision, as compared to 29% who received no treatment.^{10,11}

In cases of severe complications such as vitreous hemorrhage and retinal detachment, a surgical technique known as vitrectomy is employed. Basically, the procedure involves the cutting of tractional bands responsible for retinal detachment, and the suction removal of vitreous which has become opacified by hemorrhage. In order to maintain intraocular volume, a simultaneous saline infusion replaces removed tissue and fluid. The results of this procedure are encouraging. Approximately 40-50% of those requiring vitrectomy achieved improved visual acuity.^{12,13} The benefits are optimized when these surgical treatments are performed before severe visual loss occurs.²

All practicing physicians, regardless of their specialty, will deal with diabetics and therefore must recognize the early signs and symptoms of diabetic retinopathy. The pathological lesions on funduscopic exam have already been discussed. Patients may present with com-

Table 2

PREVALENCE OF RETINOPATHY ACCORDING TO DIABETIC ONSET

A. Age of Onset of Diabetes <30 yrs	
1. Background	
(# yrs. diab)	
17% (<5 yrs) - 97.5% (>10 yrs)	
2. Proliferative	
1.2% (<10 yrs) - 67% (>35 yrs)	
B. Age of Onset of Diabetes >30 yrs	
1. Background	
28.8% (<5 yrs) - 77.8% (>15 yrs)	
2. Proliferative	
2.0% (<5 yrs) - 15.5% (>15 yrs)	

plaints of blurred vision, decreased peripheral vision, black spots within the visual fields referred to as "floaters", spark-like flashes, and/or loss of color discrimination. Current recommendations developed by the National Diabetes Advisory Board concerning detection and monitoring, as well as referral for DR are outlined in Table 3.¹⁴ Modern technology now

Table 3

**RECOMMENDATIONS FOR DIABETIC
RETINOPATHY DETECTION,
MONITORING, REFERRAL**

AT LEAST YEARLY:

- 1) Inquire about blurring or other visual symptomatology,

AND 2) Perform a funduscopy exam WITH pupils dilated — look carefully for those lesions mentioned in Table 1.

AND 3) Measure visual acuity

offers hope to those having what was once an untreatable complication of diabetes.

If retinopathy is present upon funduscopy exam, and/or visual acuity is less than 20/40, THEN refer to ophthalmologist, OR arrange consultation with an ophthalmologist for patients who have had type I diabetes for more than 5 years and for all patients with type II diabetes.

References

1. Howie LJ, Drury IF: Current estimates from the Health Interview survey, U.S., 1977. National Center for Health Statistics, Vital and Health Series 10, No. 126, 1978.
2. Shea M: Early vitrectomy in proliferative diabetic retinopathy, *Arch Ophthalmol* 1983; 101:1204-1205.
3. Rand L: Recent advances in diabetic retinopathy, *Am J Med* 1981; 70:595-602.
4. Rand L, Krolewski A, Aiello L, Warram J, Baker R, Maki T: Multiple factors in the prediction of risk of proliferative diabetic retinopathy, *NEJM* 1985, 313:1433-1438.
5. Krolewski AS, Rand LI, Warram JH, Cristleib AR: Development of proliferative retinopathy in juvenile onset IDDM — 40 years follow-up study, *Invest Ophthalmol* 1984, 25: Suppl: 128.
6. Klein R, Klein BEK, Moss SE, Davis MD, DeMets DL: The Wisconsin Epidemiologic Study of diabetic retinopathy. II. Prevalence and risk of diabetic retinopathy when age at diagnosis is less than 30 years, *Arch Ophthalmol* 1984, 102:520-526.
7. Klein R, Klein BEK, Moss SE, Davis MD, DeMets DL: The Wisconsin Epidemiologic Study of diabetic retinopathy. III. Prevalence and risk of diabetic retinopathy when age at diagnosis is 30 or more years, *Arch Ophthalmol* 1984, 102:527-532.
8. Caird FI: Control of diabetes and diabetic retinopathy, in Symposium on the treatment of diabetic retinopathy. Goldberg MF, Fine SL, eds., Washington D.C., Public Health Service Pub. No. 1890, Superintendent of Documents, 1969, Chapter 11, pp. 107-118.
9. Knowles HC Jr.: The control of diabetes mellitus and the progression of retinopathy, in Symposium on the treatment of diabetic retinopathy. Goldberg MF, Fine SL, eds., Washington D.C., Public Health Service Pub. No. 1890, Superintendent of Documents, 1969, Chapter 12, pp. 115-118.
10. The Diabetic Retinopathy Study Research Group: Preliminary report on the effects of photocoagulation therapy, *Am J Ophthalmol* 1976, 81:383-396.
11. The Diabetic Retinopathy Study Research Group: Photocoagulation treatment of proliferative diabetic retinopathy: The second report of diabetic retinopathy study findings, *Ophthalmology (Rochester)* 1978, 85:82-106.
12. Mandelcorn MS, Blankenship GW, Machemer R: Pars plana vitrectomy for management of severe diabetic retinopathy, *Am J Ophthalmol* 1976, 81:561-570.
13. Michels RG, Vitrectomy for complications of diabetic retinopathy, *Arch Ophthalmol* 1978, 96:237-246.
14. National Diabetes Advisory Board, U.S. Dept. of Health and Human Services, Public Health Service, Centers for Disease Control: The Prevention and Treatment of Five Complications of Diabetes — A Guide for Primary Care Practitioners, 1983, pp. 6-7.

Transient Leukopenia Associated With Topical Silver Sulfadiazine in Burn Therapy

SILVER sulfadiazine (Silvadene[®], Marion Laboratories, Kansas City, Missouri) is one of the most widely used topical and antimicrobial agents in the prevention of septic complications in burn management. Reports of Silvadene associated leukopenia (SAL) have appropriately generated some controversy. Most reports in the literature indicate the incidence of SAL to be between 3-5%. This review presents the result of our experience in burn therapy with topical Silvadene over the past five years.

Methods and Patients

Using computer retrieval system, we reviewed the records of all patients admitted to Saint Joseph Hospital, Omaha, Nebraska, between May 1979 and June 1984 with the diagnosis of thermal burn injury. Only patients meeting the following criteria were included: 1) burn patient admitted to our institution within the first 24 hours of occurrence, 2) silver sulfadiazine as the only topical agent used in therapy, 3) serial complete blood count, and 4) no evidence of sepsis during the first seven days of hospitalization.

Results

Two-hundred-eighty-one patients with burn injuries were treated with topical Silvadene over this time period. Of 184 patients requiring seven days or more of hospitalization, 40 met all our criteria and formed the study group. There were 33 males and 7 females that ranged in age from 2 months to 80 years (mean age of 32 years) and percentage burn of 4-85% total body surface area (mean of 31% TBSA). Seven of the 40 (18%) patients developed leukopenia, defined as a white blood count (WBC) equal to or less than 4000, with 6 cases occurring 2-3 days after initiation of silver sulfadiazine topical therapy and on the 5th day in one patient. With no change in therapy, leukopenia resolved within 48-72 hours in all patients except one that lasted 4 days. None of these patients had evidence of sepsis. Along with the leukopenia, there was a general shift

GBARANEN B. M. GBAANADOR, M.D.
ANTHONY J. POLICASTRO, M.D.
DONNA DURFEE, PHARM.D.
JOEL N. BLEICHER, M.D.*

to the left with immature forms predominating. The detail of the findings are shown in Figure 1.

Discussion

Fox¹ experimentally first established the effectiveness of silver sulfadiazine as a topical antimicrobial agent in thermal burn therapy. Since its introduction for clinical use in the United States in 1973, silver sulfadiazine has become widely preferred in burn therapy for the following reasons: broad spectrum of bacteriocidal activity against gram-positive, gram-negative organisms, and yeast; ease of application without staining or pain; and absence of electrolyte or acid-base abnormalities commonly encountered in the use of the other topical agents such as silver nitrate, mafenide acetate, and gentamicin cream.

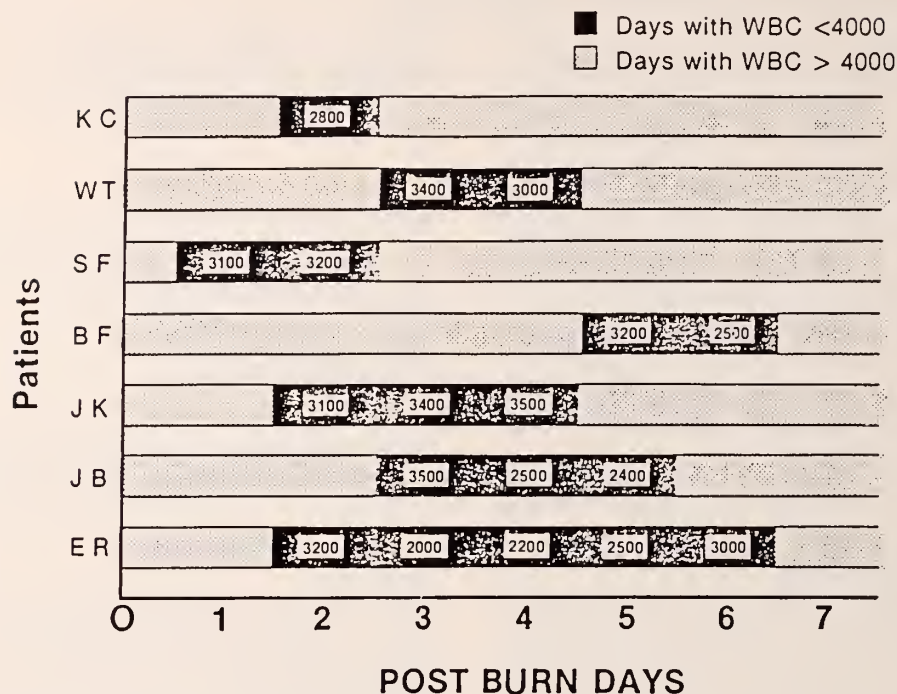
Silvadene associated leukopenia has been documented in several reports^{2, 3, 4, 5, 6, 7} but the incidence as well as the definition of leukopenia varied considerably between authors as shown in Table 1. Direct comparison is

TABLE I

Series	Definition of Leukopenia	Reported Incidence
1. Chan, 1976	Undefined	3%
2. Kiker, 1977	<5000	5%
3. Jarrett, 1978	<3500	5%
4. Valente, 1978	Undefined	—
5. Fraser, 1979	<3500	3-5%
6. Caffee, 1982	<5000	55-77%

*Correspondence and requests for reprints to: Joel N. Bleicher, M.D., F.A.C.S., Creighton University, School of Medicine, Department of Surgery, Division of Plastic and Reconstructive Surgery, 601 North 30th Street, Omaha, Nebraska 68131.

Figure 1
GRAPHIC CLINICAL SUMMARY OF LEUKOPENIC PATIENTS
(a) Initials on the graph represent leukopenic patients.



therefore difficult. There is need to establish an acceptable standard value for leukopenia in burn patients, and thereby define incidence of SAL that will enable comparison with future studies. We are proposing the traditional textbook of medicine definition of leukopenia as WBC equal to or less than 4000.⁸

The mechanism of SAL remains unclear. Kiker, et al⁶ have implicated the cream vehicle which consists of white petrolatum USP, stearyl alcohol USP, isopropyl myristate, sorbitan monooleate, polyoxyl 40 stearate USP, propylene glycol USP, and water, with methylparaben USP 0.3% as a preservative. Whereas some investigators^{3, 7, 9} have suggested an allergic or immunologic mechanism based on rechallenge leukopenia and evidence of bone marrow suppression, Fraser, et al⁴ found only hyperplasia with no evidence of marrow maturation arrest. Although absorption of silver is minimal, it is known that both the silver and sulfadiazine components appear to be involved in the antimicrobial activity of silver sulfadiazine^{10, 11, 12} and conceivably both may also be operational in the observed leukopenia. The return of white blood count to normal while the patient continues on silver sulfadiazine therapy, as noted in this and other

reports,^{4, 5, 6} implies that the mechanism is unlikely to be hypersensitivity. Four of our seven patients with leukopenia were concurrently treated with cimetidine for prophylaxis against stress ulcerations. Caffee and Bingham² compared the incidence of SAL between burn patients treated concurrently with Silvadene and cimetidine versus antacids and found no significant difference. They also noted that leukopenia promptly resolved when Silvadene was discontinued thus suggesting that Silvadene was the dominant causative factor for the leukopenia in those patients. Until further investigation, the contribution, if any, of concurrent cimetidine therapy to the observed incidence of SAL will remain debatable.

Summary

Infection is the most common cause of morbidity and mortality in burn patients and silver sulfadiazine as topic antimicrobial therapy plays a major preventive role in current burn management. The incidence and significance of leukopenia associated with the use of topical silver sulfadiazine in burn patients remain controversial. A review of silver sulfadiazine in burn therapy at our institution showed that 7 of our 40 (18%) patients developed transient leukopenia ($\leq 4,000$) that

resolved with no change in therapy. Our experience suggests that significant leukopenia is associated with topical silver sulfadiazine in burn therapy and may be more prevalent than previously reported. Whereas change in therapy does not appear necessary, continued surveillance is recommended.

References

1. Fox CL Jr: Silver sulfadiazine: A new topic therapy for pseudomonas in burns. *Arch Surg* 96:184-188, 1968.
2. Caffee HH, Bingham HG: Leukopenia and silver sulfadiazine. *J Trauma* 22:586-587, 1982.
3. Chan CK, Jarrett F, Moylan JA: Acute leukopenia as an allergic reaction to silver sulfadiazine in burn patients. *J Trauma* 16:395-396, 1976.
4. Fraser GJ, Beaulieu JT: Leukopenia secondary to sulfadiazine silver *JAMA* 241:1928-1929, 1978.
5. Jarrett F, Ellerbe S, Demling R: Acute leukopenia during topical burn therapy with silver sulfadiazine. *AM J Surg* 135:818-819, 1978.
6. Kiker RG, Carvajal HF, Mlcak RP, Larson DL: A controlled study of the effects of silver sulfadiazine on white blood cell counts in the burned children. *J Trauma* 17:835-836, 1977.
7. Valente P, Axelrod JL: Acute leukopenia associated with silver sulfadiazine therapy. *J Trauma* 18:146-147, 1978.
8. Boggs DR: The Leukopenic State. In Wyngaarden JB, Smith LH Jr (eds): *Cecil Textbook of Medicine* 16th edition. Philadelphia, WB Saunders Co, p 913, 1982.
9. Wintrobe MM: *Clinical Hematology* 8th edition. Philadelphia, Lea and Febiger, pp 1305-1308, 1981.
10. Coward JE, Carr HS, Rosenkranz HS: Silver sulfadiazine: Effect on growth and ultrastructure on pseudomonas aeruginosa. *Antimicrob Ag Chemother* 3:621-624, 1973.
11. Coward JE, Carr HS, Rosenkranz HS: Silver sulfadiazine: Effect on growth and ultrastructure of staphylococci. *Chemother* 19:348-353, 1973.
12. Fox CL Jr, Modak SM: Mechanism of silver sulfadiazine action on burn wound infections. *Antimicrob Ag Chemother* 5:582-588, 1974.

Retained Grass Seed in the Eye or "Where Not to Sow Your Wild Oats"

SUBCONJUNCTIVAL foreign bodies are not uncommon after trauma, and an inert substance such as a contact lens may remain imbedded subconjunctivally for many months.¹ However, it is quite unusual for vegetable matter to escape diagnosis beneath the conjunctiva for any length of time. The following case report describes a grass seed which remained undetected underneath the conjunctiva for more than a month.

Case Report

A 42 year old woman was pulling knee high weeds behind her garage on 6/16/86 when she had the sudden onset of pain, tearing, photophobia and foreign body sensation in her right eye. She had been using weed spray earlier, but did not remember rubbing her eye prior to the onset of her symptoms. She was wearing glasses and was unaware of anything striking the eye.

Slit lamp examination at St. Elizabeth Community Health Center later that afternoon revealed a large fluorescein-staining corneal epithelial defect occupying the superior half of the right cornea. There was a moderate proteinaceous haze in the anterior chamber fluid, but no inflammatory cells. There was marked swelling (chemosis) of the superior bulbar conjunctiva as well as a conjunctival laceration and subconjunctival hemorrhage. The conjunctival vessels were engorged, but no foreign body was noted. The exam was difficult because of the discomfort experienced by the patient whose visual acuity was only light perception.

Antibiotic and cycloplegic drops were instilled, an oral analgesic was prescribed and a pressure eye dressing was applied.

During the next week, daily slit lamp office examinations were done and the pressure patching, antibiotic and cycloplegic drops were continued. The corneal and conjunctival epithelial defects slowly healed although the upper bulbar conjunctiva remained more

J. KEMPER CAMPBELL, M.D.*
Ophthalmologist

swollen and tender than was usual with a corneal abrasion. This conjunctival swelling was felt to possibly represent a toxic reaction to herbicide accidentally rubbed into the eye or from an insect sting.

By 7/10/86 corrected vision had returned to 20/20 but the patient still complained of an intermittent foreign body sensation. Her exam showed continued conjunctival erythema but no fluorescein staining. Minimal superficial punctate staining of the limbal cornea was thought to represent drying adjacent to the swollen conjunctiva.

The patient was discharged on antibiotic ointment H.S. and p.r.n. artificial tears during the day. She was instructed to call back if the foreign body sensation persisted for another week.

On 7/20/86, the redness and discomfort increased, and upon rubbing the eye she extracted an inch-long weedlike foreign body covered with mucous. (Fig. 1)



*Reprint requests to J. Kemper Campbell, M.D., 630 North Cotner Blvd., Suite 105, Lincoln, NE 68505, (402) 467-2521.

A new epithelial defect in the superior conjunctiva was noted at this time. Her symptoms greatly improved after this and although some tenderness persisted for several weeks, the eye eventually returned to complete normalcy.

Discussion

Plant seeds and thorns have been reported as the cause of serious ocular injuries in the past.^{2,3} There has even been a report of a plant seed germinating within the anterior chamber of the eye.⁴ Such cases are most uncommon, however.

Downy Brome (*Bromus tectorum*), commonly called "wild oat", is a weed found throughout Nebraska. This winter annual grass, which reproduces by seed, grows along roadsides and attains a height of 1-3 feet. Its leaves are covered by a soft, fine hair. The dry spikey seeds on the top of the plant are spread by clinging to animals or clothing.⁵

Interestingly, cattle are prone to imbedding these seeds into their eyes while grazing and veterinarians occasionally need to remove them from the cows' conjunctiva or cornea.

In this patient, the seed must have abraded the cornea prior to penetrating the conjunctiva and entering the subconjunctival space. The original conjunctival laceration must have been the entry site and the subconjunctival hemorrhage prevented visualization of the seed. It is unlikely that a foreign body this size in the conjunctival fornix could have escaped detection during the multiple slit lamp exams with double eversion of the lids and fluorescein staining.

The marked chemosis of the conjunctiva undoubtedly represented the patient's reac-

tion to the foreign vegetable matter which was eventually extruded through a separate tear in the conjunctiva.

The remarkable aspect of this case, in addition to the size of the undiagnosed foreign object, is that no purulent infection developed during the 34 days the seed was under the conjunctiva. This was probably because she was on topical antibiotics from the first day of the injury.

Recommendations

Obviously prevention of similar injuries by the wearing of safety glasses while weeding would be ideal. However, it is likely that ocular injuries from weeds will continue to occur occasionally in Nebraska.

This case illustrates the fact that an early operative exploration of the subconjunctival space may be warranted in patients with persistent swelling and discomfort.

Acknowledgements

Appreciation is expressed to Mr. Alex Martin, Professor of Agronomy and Extension Weeds Specialist at the University of Nebraska for his help in identification of the seed and to Dee Cudaback, M.S. for secretarial assistance.

References

1. Nicolitz E, Flanagan J: Orbital Mass as a Complication of Contact Lens Wear. *Arch Ophthalmol*, 96:2238-39, 1978.
2. Bettman JW, Packer S, Albert D: Penetrating Ocular Injury by a Plant Seed. *Arch Ophthalmol*, 85:695-98, 1971.
3. Bhargave SF: Penetrating Thistle Bracts Injury. *Br J Ophthalmol*, 55:421-23, 1971.
4. Abel S: Germinating Seed in the Anterior Chamber. *Arch Ophthalmol*, 97:1651, 1979.
5. State of Nebraska Dept. of Agriculture: *Nebraska Weeds*, Lincoln, NE 1936 pp 34-35, 214-215.

PERINATAL PAGE

Cesarean Section and the Small Fetus

- I. Introduction
- II. Profile of the VLBW Neonate
 - A. Congenital Anomalies
- III. Determining Whether This Fetus Can Survive In The Nursery
- IV. Trauma of Vaginal Delivery - Vertex Presentaion
 - A. Perinatal Mortality Rate
 - B. Intraventricular Hemorrhage
 - C. Long Term Brain Damage
- V. Trauma of Vaginal Delivery - Breech Presentation
- VI. Preparation For Delivery
- VII. Summary

THE chance for survival of the low birthweight infant has improved dramatically in recent years. Much of this success can be attributed to improvement in neonatal intensive care. Some investigators have suggested that the use of routine cesarean section in the low birthweight fetus could avoid the trauma of vaginal delivery, but it is unclear how much this would improve overall neonatal outcome. The purpose of this review is to examine the relationship between the route of delivery and neonatal outcome in the very low birthweight (VLBW) fetus.

Profile of the VLBW Neonate

Infants with birthweights ≤ 1500 grams are defined as very low birthweight. Neonates are in the VLBW category because they are premature (usually less than 32 weeks' gestation) or because they are growing slowly in **utero** (intrauterine growth retardation). This group of infants makes up less than 2% of the newborn population, but can account for up to 80% of all neonatal deaths. The profile of this group of newborns reveals the following.¹

WEIGHT DISTRIBUTION

- 500-1000 Grams 30%
- 1001-1500 Grams 70%

THOMAS L. GROSS, M.D.

Associate Professor, and Chairman Department of Obstetrics and Gynecology, University of Illinois College of Medicine at Peoria

FETAL PRESENTATION

- Vertex 80%
- Breech 20%

FETAL MATURITY

- Small Premature 70%
- Small Growth Retarded 30%

NUMBER OF FETUSES

- Singleton 80%
- Multiple Pregnancies 20%

LABOR

- Spontaneous Preterm 80%
- Induction 20%

As shown above, 30% of this group of VLBW fetuses weigh between 500-1000 grams at delivery, and 70% weigh between 1000 and 1500 grams. In the overall obstetrical population, about 4% of all fetuses are breech at the time of delivery, but in this population of VLBW fetuses, breech presentation occurs in up to 20%. About 80% of the group are in spontaneous premature labor, but a significant number of this population have their labor induced because of medical complications including amnionitis, placenta previa or placental abruption, severe toxemia, fetal distress, or prolapsed umbilical cord.

Congenital Anomalies

VLBW fetuses have a three-fold increase in the frequency of congenital anomalies when compared to the 2% rate of major congenital anomalies occurring in the overall obstetric population. It is well known that the pregnancies in which the fetus presents by the breech have an overall increase in the rate of major congenital anomalies. However, this

increase in congenital anomalies occurring in patients that deliver prematurely is present in both vertex and breech presenting fetuses. The anomalies present can be correctable defects, such as congenital heart disease, but can also include many anomalies incompatible with life. It must be remembered that some of these anomalies incompatible with extra-uterine life can be diagnosed prenatally with ultrasound, and this information could be used in management of the delivery.

Determining Whether This Fetus Can Survive in the Nursery

A major question that must be answered early in the course of management is whether the fetus is mature enough to potentially survive in the nursery. This group of pregnancies with VLBW fetuses have ranges of gestational age from 24-32 weeks and fetal weight from 500-1500 grams, and have dramatically increased potential for neonatal survival in recent years. Many centers now consider the 24-25 week fetus viable. The major factor for predicting whether the fetus has a chance at survival is the estimate of gestational age. However, frequently in this group the obstetrical dating of the pregnancy is questionable because of unknown last menstrual period. Clinical estimates of the fetal weight are frequently not helpful since often it is necessary to detect very small differences such as the increment between 550 and 650 grams. One of the most helpful uses of ultrasound is the development of protocols to accurately estimate fetal weight. It is not possible to give a standard definition of fetal weight below which the fetus is not viable and thus the mother is not a candidate for delivery by cesarean section that would apply to all hospitals. This has to be decided individually for each patient and should be based on the opinion of the physicians in charge of that neonatal intensive care unit. At the present time, babies at 25 weeks' gestation and weighing 600 grams are surviving with increasing frequency.

Trauma of Vaginal Delivery - Vertex Presentation

It's clear from the profile of this group of VLBW infants outlined above, that these babies have many reasons to have abnormal outcomes, other than just the trauma from labor and delivery. The cesarean section is

only one part of a very complex problem involving questions regarding all aspects of obstetric and pediatric management.

However, because of recent interest in the increase in abdominal delivery, the question of whether routine cesarean section for the very low birthweight fetus in vertex presentation improves outcome needs to be addressed. Three measures of outcome will be examined: perinatal mortality rate, frequency of intra-ventricular hemorrhage, and subsequent long-term brain damage in the infant.

Perinatal Mortality Rate

Early retrospective uncontrolled studies reported that the very low birthweight fetus had a lower perinatal mortality rate when delivered by cesarean section. One of the major reasons for these early results was likely related to obstetrician's attitude. If the obstetrician thought that the fetus had a chance at survival, it was delivered by cesarean section, but other fetuses considered to have little chance at surviving were delivered vaginally. Because of this selection bias, a group of fetuses more likely to survive the neonatal period was included in the cesarean section group. Paul, et al² attempted to antenatally predict fetuses weighing >1000 grams and found that in 35% of these pregnancies, the obstetrician underestimated fetal weight. The highest perinatal mortality occurred in patients in whom the fetal weight was underestimated. In fact, the obstetrician's attitude as to whether the baby could or could not survive was believed to be one of the major factors associated with perinatal mortality.

As described previously there are many maternal medical and obstetrical complications that could explain the poor outcome, besides the trauma from the labor and delivery. Recent studies have attempted to use statistical techniques in order to correct for multiple other factors that could be related to outcome other than the route of delivery. These studies attempt to adjust for birthweight, gestational age, the use of steroids to accelerate fetal maturity, congenital anomalies, the presence of a pediatrician for resuscitation, and certain maternal complications.^{3, 4} Nearly all of these studies have reported that very few of the neonatal deaths can be explained by the route of delivery, and if routine cesarean section improves outcome, it

is a very small effect.^{3, 4} Furthermore, the conclusions have been that cesarean sections should not be performed routinely, but only for obstetrical indications, in the VLBW fetus in vertex presentation.

All of these studies thus far reported in which the effect of the route of delivery in the very low birthweight vertex presenting fetus have been examined have been retrospective. Because of this, they have a major flaw in that, even though the investigators attempt to adjust for gestational age and other complications, it is not possible to match the study and control groups. Based on our knowledge of clinical management, the patients that have the major reasons for fetal compromise will be highly concentrated in the abdominally delivered group. This means that factors such as prolonged labor, unfavorable cervix, uncontrolled vaginal bleeding, fetal distress and major catastrophes such as abruption and prolapsed umbilical cord, are always more common in the cesarean section group. This will markedly influence the results, since the potential benefit of cesarean section may be obscured.

It is impossible to match a vaginally delivered and a cesarean section delivered group for all of the complications that occur. This means that there are still questions that remain as to whether or not routine abdominal delivery decreases perinatal mortality in the VLBW fetus.

Intraventricular Hemorrhage

In recent years, it has been hypothesized that vaginal delivery could increase the risk of intraventricular hemorrhage in these very fragile VLBW neonates. The trauma has generally been hypothesized to result from the pressure of the cervix or pressure of the maternal birth canal on the fetal head. In addition, the acidosis or hypoxia that may occur during labor may also predispose the fetus to subsequent intraventricular hemorrhage during the neonatal period.

Most of the evidence at this time implicating intrapartum trauma or acidosis with intraventricular hemorrhage is indirect. First of all, it is known that the immature central nervous system of the very low birthweight fetus is more susceptible to hemorrhage. In addition, intrapartum hypoxia can increase blood flow to

the brain and this blood flow can cause breakdown of periventricular capillaries and can also cause hemorrhage in the subependymal and intraventricular structures.

At the present time, there are two groups of studies in this area. One group of investigators believes that nearly all of the intraventricular hemorrhage that occurs can be explained by prematurity and is not affected by the delivery route.⁵ The more premature the fetus, the more likely it is that intraventricular hemorrhage will occur. Other investigators believe that the VLBW neonate delivered vaginally is more likely to have intraventricular hemorrhage than the comparison group delivered by cesarean section.⁶ At the present time, the results are contradictory regarding the effect of cesarean section on significantly decreasing intraventricular hemorrhage in the group of VLBW fetuses presenting by the vertex.

This is one of the most promising areas for research in the controversy of how to deliver this group of babies. The occurrence of neonatal intraventricular hemorrhage is well suited to research protocols in which ultrasound can be performed in all premature neonates immediately upon delivery and then serially in the first several days of life. If carefully controlled prospective studies are performed, we may find the answer as to whether vaginal delivery increases intraventricular hemorrhage. This could eventually alter our management in the future.

Long Term Brain Damage

It is important to address the question of whether cesarean section decreases perinatal asphyxia and decreases long term cerebral injury in the group of VLBW fetuses presenting by the vertex. Unfortunately, most previous studies correlating perinatal asphyxia with subsequent cerebral injury have been indirect clinical studies. These studies usually correlate clinical events that are assumed to be associated with hypoxia with subsequent brain injury in the infant. This type of study is likely to be very unreliable and much of the previous work in this area was summarized in a National Institutes of Health Consensus Conference earlier this year.

National Institutes of Health Consensus Report on Perinatal Asphyxia

In April 1985, the National Institutes of Health (NIH) released a consensus report

examining the relationship of perinatal asphyxia and subsequent brain injury.⁷ The report stated that "With a reasonable degree of certainty birth trauma and asphyxia are not frequent causes of long term brain damage." The NIH report estimated that only 15% of severe mental retardation, and approximately 25% of cerebral palsy may be caused by perinatal asphyxia. Conversely, the report suggested that 75% of all severely asphyxiated neonates grow up with no major handicaps.

Perinatal asphyxia is one of the important known factors related to cerebral palsy. Of the known causes of cerebral palsy, prematurity and hypoxia are the most frequently identifiable risk factors. However, as noted above, less than 25% of the cases of brain damage are associated with these two factors. The remaining 75% of cases usually have no recognizable cause.

The lay public and legal profession continue to assume that perinatal asphyxia almost always results in long term brain damage. Physicians and patients need to be made aware of the NIH findings, since the report has received very little publicity at this time.

Trauma of Vaginal Delivery - Breech

As many as 20% of VLBW fetuses are delivered in the breech presentation, and so this group must be dealt with separately. The three major types of breech presentation are: 1) the frank breech - the knees are extended and only the smooth buttocks present in the dilating cervix, 2) the complete breech - the knees are flexed and both the feet and buttocks present in the cervix and 3) the single or double footling - one or two feet present in the cervix. The complete breech and the footling breech are much more dangerous during labor and vaginal delivery, since prolapse of the umbilical cord or entrapment of the fetal head during delivery are more likely to occur. In the premature fetus, the complete and footling breeches are much more common, accounting for 60% of the VLBW breech population. In the patients at term gestation, only 25% of the breech fetuses are the complete and footling type, and the remainder are the safer frank breech. In addition, a rare complication, hyperextension of the fetal neck or the so-called "stargazing fetus" is more common in the premature breech. Transection of the fetal cervical spinal cord can occur in up

to 75% of the patients with this type of breech at the time of vaginal delivery.

There is no definitive study demonstrating how the premature breech should be delivered. However, major catastrophes, including prolapse of the umbilical cord, entrapment of the fetal head, and transection of the spinal cord are increased with the premature breech, but these problems can be prevented by cesarean section. Most experts feel that the VLBW breech fetus (up to 1500 grams estimated birthweight) should be delivered by cesarean section.

The clinician must remember that breech presentations at all gestational ages are associated with an increased frequency of congenital anomalies.⁸ In addition, certain chronic syndromes beginning early in pregnancy (all associated with decreased muscle tone and mental retardation) have been reported to be increased in fetuses presenting by the breech. This suggests that the breech fetus may have been abnormal prior to labor, and in these patients no therapy, including a routine atraumatic c-section, will normalize the neonatal development.

Preparation for Delivery

The minimal gestational age or minimal birthweight at which an aggressive approach to the management of labor and delivery should be utilized needs to be determined jointly by an obstetrician, neonatologist and ultrasonographers for each individual patient. The fetal presentation should be determined. For both the vertex and the breech fetus, the presence of multiple pregnancy, major fetal anomalies and estimates of fetal weight need to be determined accurately. Often, intrapartum management decisions for the VLBW fetus are based largely on the estimate of fetal weight, and so a protocol to determine fetal weight by ultrasound needs to be available. A joint decision should be made including the neonatologist, regarding whether the fetus is mature enough to be considered viable in the nursery. In borderline cases such as 23-24 weeks' gestation, this must be thoroughly discussed with the parents.

Once it is confirmed that the fetus in question is mature enough to survive in the nursery, a multifaceted approach should be used with none of the areas omitted. First,

intrapartum fetal surveillance using internal electronic fetal heart rate monitors, and when indicated, fetal scalp blood pH measurements need to be implemented. Second, cesarean section should be resorted to earlier for conditions that may compromise the fetus, since the premature fetus is more susceptible to hypoxia. Finally, there needs to be a commitment to resuscitate the newborn immediately upon delivery, preferably with a neonatologist in the delivery room. None of these three steps can be omitted without potentially jeopardizing the outcome. For example, if a cesarean section were performed because of suspected distress in an attempt to lessen the fetal hypoxia, and a neonatologist or a well trained pediatrician was not present in the delivery room to resuscitate the baby, the benefits of the cesarean section may be entirely lost.

Summary

With regard to delivering the VLBW fetus in vertex presentation, routine cesarean section has not been shown to be safer for either immediate or long term outcome. The question of whether neonatal intraventricular hemorrhage is decreased by cesarean section is not answered completely and deserves further study. For the VLBW fetus in breech presentation, cesarean section appears to be safer for the fetus. Although the literature is not definitive in this area, there is an increase in

major neonatal complications with vaginal delivery. The obstetrician should remember that in both vertex and breech presenting fetuses, in this VLBW population the risks of complications due to prematurity are the most significant; in addition, some neurological abnormalities may be present prior to the onset of labor. This means that even routine cesarean section does not guarantee a favorable outcome.

References

1. Fairweather DVI: Obstetric management and follow-up of the very-low birth-weight infant. *J Reprod Med*, 26:387, 1981.
2. Paul RH, Koh KS, Monfared AH: Obstetric factors influencing outcome in infants weighing from 1,001 to 1,500 grams. *Am J Obstet Gynecol*, 133:503, 1979.
3. Olshan AF, Kirkwood KS, Luthy DA et al: Cesarean birth and neonatal mortality in very low birth weight infants. *Obstet Gynecol*, 64:267, 1984.
4. Rosen MG, Chik L: The association between cesarean birth and outcome in vertex presentation: Relative importance of birthweight, Dubowitz scores and delivery route. *Am J Obstet Gynecol*, 150:775, 1984.
5. Worthington D, Davis LE, Grausz JP, et al: Factors influencing survival and morbidity with very low birth weight delivery. *Obstet Gynecol*, 62:550, 1983.
6. Bejar R, Carbelo V, Coen R, et al: Large intraventricular hemorrhage and labor in infants ≥ 1000 g. *Pediatr Res*, 15:649, 1981.
7. Prenatal and Perinatal factors associated with brain disorders. National Institutes of Health, Publication No. 85-1149, Ed, Freeman JM, April, 1985.
8. Confino E, Gleicher N, Elrad H: The Breech Dilemma: A Review. *Obstet Gynecol Survey*, 40:330, 1985.

President's Page

MEDICAL TRAINING "CAN CHANGE NICE GUY INTO EGOTIST"

I read an article recently in the Perspective & Commentary Section of the Family Practice News, written by a resident physician, Dr. Christopher Sanford. He started off his article by stating that a physician had mentioned to him that the physician's mother had told him that he was a nice guy until he went to medical school. As he continued his story, he made several points indicating that as a result of the selection process for medical students, and for reasons intrinsic to the training process, being a nice guy and being a physician just didn't seem to mix.

I don't necessarily agree with that viewpoint, but I was intrigued enough to read the rest of the article and must admit that there were several points in the article that made me stop and think, and certainly caused me, as a physician, to feel a little uncomfortable. I thought that I would condense some of the comments he made and submit them in this message as at least being worthy of some consideration.

He mentions that part of being a nice person is open-mindedness, but doctors generally know the Truth. You can agree with and share the Truth, or disagree and be wrong. He continued that if doctors limited knowing the Truth to medical matters, it would be insufferable enough, but the superior attitude tends to spill over into all areas of their lives. After being a physician for 80 hours a week, it is difficult to "shut off" the doctor attitude in social situations, even when discussing something far removed from medicine. Doctors are trained to be right, and to be corrected on any topic is a slight to their mental powers and thus to their competence as physicians.

Dr. Sanford mentioned another trait of physicians that he perceived that makes them difficult to be around is their ongoing sense of entitlement. He states that doctors implicitly, yet continually, seem to be saying "I've been hurt, I've been wronged, I work harder than anybody else and by God, I deserve something for it." He continues that this stems, in large part, from an attempt to make sense of the toll



Hiram R. Walker, M.D.

that their training and profession extract, and that a common way to be compensated for their toils is obvious — cash money, preferably in large amounts.

A point that he made regarding admission to medical school was that the committees have criteria that does tend to select a certain type individual. To be assured of acceptance into medical school usually requires a high grade point average in undergraduate studies, and scoring well on the Medical College Admission Test. To score well on these multiple-choice exams requires a great store of knowledge, usually obtained by the willingness of the individual to sit and study an excessive amount and to exclude nearly all other activities. They are individuals who have such a strong desire to be doctors that they will sacrifice nearly every other area of their lives. Medical students are often in their late twenties or even older before finishing training. This tends to force upon them, an extended childhood, being dependent upon parents and financial aid offices for their support. The long hours of study and work during medical school, and stress of residency training and mounting debts cause relationships to deteriorate, and social skills to erode. A feeling of resentment can develop as year after year it is necessary to live in cheap apartments, wear the same clothes and drive old beat-up cars.

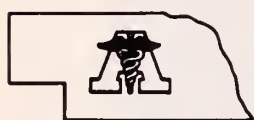
He concludes his article by stating that he

had over generalized, and that in fact he found many doctors who were nice guys.

I suspect that my reaction of feeling a little uncomfortable about some points in the article

relates to the old adage "that if the shoe fits - wear it."

Hiram R. Walker, M.D.
President



The Auxiliary

Dear Auxilian,

Your work in the auxiliary can make the difference between life and death. Just minutes ago we learned that two of my daughter's high school friends survived a car crash with an 18 wheeler truck with only MINOR INJURIES. The crash totaled the car and it took the jaws of life to remove the girls. The driver had her seat belt on; the other gal, a foreign exchange student from Spain, did not. On impact the exchange student slammed into the other girl. She was able to hold them both in the car with her seat belt. Otherwise they would have both been thrown from the car and killed. The driver received a broken collar bone and hip fracture from the other girl flying into her. All the effort our auxiliary has done with drivers education, Lamaze classes, booths at the health fair, and work to get the seat belt law passed has payed off in this one accident.

How many people has Ardis Grace helped to a longer life? What about Helen Krause and all of her work on mammography? The list goes on and on.

Some of the areas in the next few years that

your auxiliary will probably want to be concerned with is teenage pregnancy, seat belt education, drug and alcohol abuse programs, colorectal screening, AIDS, — there are so many health needs and problems now.

Adams Co. is having its 2nd annual health fair March 14 & 15. The first one was a great success. This year we will be adding colorectal screening (thanks to Ardis Grace). The auxiliary and Adams County Extension went together on this booth. Last year and this year we will be handing out plastic Easter eggs since its close to Easter. Inside of these eggs is a small bear with his seat belt on. Thank goodness for craft talented people. The eggs were a tremendous success with the children. The eggs and the stickers brought the kids and parents to the booth and that's when public education began about seat belt safety.

Maybe a health fair would be a good idea for your community.

Remember: Buckle Up.

Linda Brown
Health Projects Chairman

LANCASTER COUNTY HEALTH PROJECTS

Last spring Lancaster County Medical Auxiliary celebrated its tenth year of CPR teaching which was recognized by a nice article and picture in the Lincoln Journal. Several auxiliarians took the CPR Instructors course in the spring of 1976 and started teaching classes for our own members and church and community

groups. With rising interest and the impetus of the Statewide CPR Campaign, more members became instructors and some of us took further training to become Instructor Trainers and Affiliate Faculty with the American Heart Association so we could train more CPR Instructors to help with teaching. The Auxili-

ary purchased Resusci-Annes and baby manikins for our use, and Lincoln Community Women's Club donated their Annes to us when they discontinued teaching.

We have taught CPR classes in Junior and Senior High health classes in both public and parochial schools. At East Junior High, the health teachers have become certified instructors so they can do the lecture and demonstration portion of the class, and our instructors help with practice and testing. Ideally all Junior High students should be certified in CPR through their required health courses, but limited time and manpower currently do not allow it because of the necessary 1:6 instructor to student ratio.

In the nearly eleven years of teaching over two thousand four hundred students have been certified or recertified in over two hundred Basic and Instructor courses. That means a lot of volunteer instructor hours spent teaching a life-saving skill since each course is at least six hours.

Currently we are the only group of instructors who teach volunteer daytime CPR classes in Lincoln. This fall we have taught classes for public school health aides, our auxiliary, and East Junior High. Coming up will be more sessions at East and one or two parochial schools.

Another long-term health project of ours is helping with Community Blood Bank mobiles two to four times per month. Nurses help take blood pressures and temperatures of donors or supervise them after donating. And non-nurses serve as hostesses or prepare the bags of blood for transport. This is a visible service to the community.

A third health project is our community service seminar which is held at Southeast Community College. This year the topic will be "The Middle Years: The Link Between Generations" presented on Saturday, April 4. The purpose of the seminar is to develop an awareness of the physical, emotional, and social changes that occur in the middle years, the time when we find ourselves having the responsibility of children or young adults with the added needs and dependency of aging parents.

Speakers and topics are "Life in the Middle Years", Y. Scott Moore, M.D.; "Options, Abilities, and Selling Yourself", Janet Ford, MSW, Gordon Scott, D.D.; "Stages of Marriage", Gordon Scott, D.D.; "Physiological Changes of Middle Age", Joseph Rogers, M.D.; "Dealing with Aging Parents", Bridget Cannon-Nifoussi, M.S.; "Parenting Adolescents", Toni Santmire, Ph.D.; "Eating Disorders", Pat McLoughlin, R.N.; "Living Single", Sue Schlichtemier; "Stressing Positive Self-Image", Sue Schlichtemier.

The cost of the all day seminar will be \$10 including lunch. Call or write to: Southeast Community College, Adult Education Dept., Lincoln, NE 68505 for a brochure.

* * *

Marie Hovland (Mrs. James), Aberdeen, SD, North Central Region Director, will be the speaker at Lancaster County Medical Auxiliary's meeting on Monday, April 6, 1987. If you would like to attend contact: Joyce Urbauer, 2000 Lawnsdale, Lincoln, NE 68506.

Joyce Urbauer
President LCMA

Coming Meetings

UNIVERSITY OF NEBRASKA MEDICAL CENTER

36TH ANNUAL OB-GYN CONFERENCE — March 12-13, 1987 at the Holiday Inn Central, Omaha, Nebraska. Fee: TBA. Contact Marge Adey, University of Nebraska Medical Center, Center for Continuing Education, Omaha, Nebraska 68105. (402) 559-4152.

UNIVERSITY OF NEBRASKA COLLEGE OF MEDICINE ALUMNI ASSOCIATION — Annual Executive Committee Dinner Meeting is planned for late March 1987. Invitations with details will be sent to the committee.

UNIVERSITY OF NEBRASKA COLLEGE OF MEDICINE — ALPHA OMEGA ALPHA, NEBRASKA CHAPTER — Visiting Professorship, March 23-25, 1987 at UNMC, Omaha. AOA Convocation, Wed., March 25, 12:00 noon, Center for Continuing Education Amphitheater, UNMC. AOA Banquet, Wed., March 25, 6:30 p.m., Highland Country Club 12627 Pacific Street, Omaha. Visiting Professor: Thomas C. Chalmers, M.D., Internist at Mt. Sinai Medical Center, New York City.

FAMILY PRACTICE REVIEW — A COMPREHENSIVE UPDATE — March 30-April 10, and April 27-May 8, 1987 at the Center for Continuing Education, UNMC, Omaha, Nebraska. Sponsored by the Department of Family Practice, UNMC. The fee to attend this 100 credit hour AMA Category I and AAFP Prescribed Program is \$850. (one week or split week registrations are available with special arrangements).

UNIVERSITY OF NEBRASKA COLLEGE OF MEDICINE ALUMNI ASSOCIATION — Annual Business Meeting and Reception for New Honorary Alumni, Saturday, April 25, 1987 in conjunction with the NMA Meeting; Alumni meeting at 4:30 p.m. at the Cornhusker Hotel in Lincoln, Conference

Rooms 2 and 3. Reception at 5:30 p.m. in Conference Room 4. Alumni and spouses are encouraged to attend. Guests are welcome.

UPDATE ON GENERAL PEDIATRICS — June 28-July 2, 1987 at Jackson Hole Racquet Club, Jackson, WY. Sponsored by the Department of Pediatrics, UNMC.

SPORTS MEDICINE UPDATE 1987 — July 5-9, 1987 at the Jackson Hole Racquet Club, Jackson, WY. Sponsored by the Department of Orthopaedic Surgery and Rehabilitation, UNMC.

CARDIOVASCULAR DISEASE PREVENTION IN THE YOUNG AND THE ADULT — August 2-5, 1987 at the Snowmass Club, Snowmass, Colorado. Sponsored by UNMC.

EMERGENCY MEDICINE REVIEW — September 21-26, and October 5-10, 1987 at the Center for Continuing Education, UNMC, Omaha, NE 45 hours of ACEP Category I credit and 45 prescribed hours by the AAFP and AMA Category I.

For further information or to register for the above courses contact: Marge Adey or Brenda Ram, Center for Continuing Education, University of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, Nebraska 68105. Telephone (402) 559-4152.

ADVANCED TRAUMA LIFE SUPPORT — March 23-24, May 28-29, September 28-29, 1987. Omaha, Nebraska. Fee: \$475. 17.0 Hours AMA Category I. 17.0 Prescribed Hours AAFP. 17.0 Hours ACEP Category I. For further information on these three courses contact Cindy S. Hanssen, University of Nebraska Medical Center, Center for Continuing Education, 42nd & Dewey Avenue, Omaha, Nebraska 68105-1065. Phone (402) 559-4152. In Nebraska, call: 800-228-1095. All other states, call: 800-228-9630.

UPCOMING UNMC CONTINUING EDUCATION COURSES

ADVANCED CARDIAC LIFE SUPPORT —
Mar. 10-11, 1987 — Initial Certification.
Omaha, Nebraska. Registration Fee: \$130.
14.5 Hours AMA Category I.

ADVANCED CARDIAC LIFE SUPPORT —
Apr. 15, 1987 — Recertification. Omaha,
Nebraska. Registration Fee: \$50. 7.2 Hours
AMA Category I.

ADVANCED CARDIAC LIFE SUPPORT —
May 18-19, 1987 — Initial Certification.
Omaha, Nebraska. Registration Fee: \$130.
14.5 Hours AMA Category I.

ADVANCED CARDIAC LIFE SUPPORT —
May 20, 1987 — Instructor Course. Omaha,
Nebraska. Registration Fee: \$60. 6.0 Hours
AMA Category I.

ADVANCED CARDIAC LIFE SUPPORT —
June 1, 1987 — Recertification. Omaha,
Nebraska. Registration Fee: \$50. 7.2 Hours
AMA Category I.

For further information, contact Ann Fitzgerald, University of Nebraska Medical Center, Center for Continuing Education, 42nd & Dewey Avenue, Omaha, Nebraska 68105-1065. Phone (402) 559-4152. In Nebraska, call: 800-228-1095. All other states (except Alaska), call: 800-228-9630.

CREIGHTON UNIVERSITY

ANNUAL OB-GYN POSTGRADUATE PROGRAM — Co-sponsored with the University of Nebraska, March 12-13, 1987, Holiday Inn Central, Omaha, NE. Program Directors: Joseph C. Scott, M.D. and James W. Daly, M.D., Hours: TBA. Fee: TBA.

ADVANCES IN ANTITHROMBOTIC THERAPY — Mar. 14, 1987 — Saint Joseph Hospital, Omaha, Nebraska. Program Director: Syed M. Mohiuddin, M.D. 6 credit hours Category 1, fee: TBA.

FLORIDA TUTORIAL (OB-GYN) — Mar. 26-27, 1987, Airport Marriott Hotel, Or. R.G. Monif, M.D. 14 credit hours Category 1; fee: \$175 (residents free)

THE ROLE OF ECHOCARDIOGRAPHY IN THE DIAGNOSIS AND MANAGEMENT OF CARDIAC EMERGENCIES — Apr. 10-11, 1987, Saint Joseph Hospital, Omaha, Nebraska. Program Director: Syed M. Mohiuddin, M.D. Hours: TBA. Fee: TBA.

INFECTIOUS DISEASE SYMPOSIUM — April 15, 1986, Saint Joseph Hospital, Omaha, Nebraska. 6 credit hours Category 1. Fee: TBA.

PEDIATRIC INFECTIOUS DISEASE SYMPOSIUM — May 8-9, 1987, Boys Town Conference Center, Boys Town, Nebraska. Program Director: Dr. Steven Chartrand. 12 credit hours Category 1. Fee: TBA.

FAMILY MEDICINE UPDATE — May 22-24, 1987, Okoboji, Iowa. Program Director: Fred J. Pettid, M.D., Hours: TBA, Fee: TBA.

MAURICE E. GRIER SYMPOSIUM (OB-GYN) — June 6, 1987, Marriott Hotel, Omaha, Nebraska. Program Director: James W. Daly, M.D. Hours: TBA. Fee: TBA.

WHAT YOU NEED TO KNOW ABOUT PERINATAL ULTRASOUND — June 12-13, 1987, Holiday Inn Central, Omaha, NE. Program Director: Washington C. Hill, M.D., Hours: TBA Fee: TBA. Omaha, NE

A DAY WITH THE PERINATOLOGISTS — September 25-26, 1987, Red Lion Inn, Omaha, NE. Program Director: Washington C. Hill, M.D., Hours: TBA, Fee: TBA.

VISITING PROFESSOR SCHEDULE — 1987

March 13-14, 1987

Wallace Ritchie, M.D., Professor and Chairman, Department of Surgery, Temple University.

April 10-11, 1987

Clement Hiebert, M.D., Chief, Cardiovascular Surgery, Maine Medical Center.

April 17-18, 1987

Hiroshi Akiyama, M.D., Chief of Surgery, Toranomon Hospital, Tokyo, Japan.

May 8-9, 1987

Roland Folse, M.D., Professor and Chairman, Surgery, Southern Illinois University School of Medicine Chairman of Residency Review Committee.

September 11-12, 1987

John Cameron, M.D., Surgeon-in-Chief, The John Hopkins University, Department of Surgery, Baltimore, Maryland.

October 23-24, 1987

Hiram C. Polk, Jr., M.D., Professor and Chairman, Department of Surgery, University of Louisville, School of Medicine, Louisville, Kentucky.

For further information or to register, contact: Creighton University School of Medicine Division of CME, Omaha, NE 68178, 402-280-2550 or outside Nebraska Toll free 800-228-7212, Ext. 2550. The Creighton University School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.

LINCOLN GENERAL HOSPITAL

THE SIXTH ANNUAL CORNHUSKER/
CANADIAN CLINICAL CONFERENCE
— June 20-27, 1987 at Lynn Lake, Manitoba, Canada. Fee: \$150. For information contact: Sharlene Knippelmeyer, RN, BS, Education and Staff Development, Lincoln General Hospital, 2300 South 16th Street, Lincoln, NE 68502, (402) 473-5638.

UNIVERSITY OF KANSAS

For information concerning the following continuing education offerings sponsored by the University of Kansas Medical Center contact: Carole Rosen, Promotions Coordinator, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Boulevard, Kansas City, KS 66103 (913) 588-4480.

INTERNAL MEDICINE SYMPOSIUM —
Mar. 1-7, 1987 — Sponsored by: University

of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, KS 66103. 18 Category I AMA, AAFP credit hours. Location: Cancun, Mexico. Contact: Eileen Buttron, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103.

COMMON PROBLEMS IN GASTRO-
ENTEROLOGY — Mar. 16, 1987 —
Sponsored by: University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, KS 66103. Credit: AMA, AAFP. Location: TBA. Contact: Eileen Buttron, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103.

SAME E. ROBERTS NUTRITION — Mar. 31, 1987 — University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, KS 66103. Credit: AMA, AAFP, CNE, ADA. Location: Battenfeld Auditorium, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103. Contact: Eileen Buttron, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103.

WHAT'S NEW IN DIABETES — Apr. 1, 1987 — Sponsor: University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, KS 66103. Credit: AMA, AAFP, CNE, ADA. Location: Battenfeld Auditorium, University of Kansas Medical Center, 39th & Rainbow, Kansas City, KS. Contact: Eileen Buttron, Office of Continuing Education, University of Kansas Medical Center Contact: Eileen Buttron, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103. 913/588-4494.

PEDIATRICS — Apr. 2-3, 1987 — Sponsored by the University of Kansas Medical Center. Location: Battenfeld Auditorium, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103. Credit: AMA, AAFP, CNE. Contact: Eileen

Buttron, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103.

37TH ANNUAL ANESTHESIOLOGY SYMPOSIUM — Apr. 24-26, 1987 — Sponsored by the University of Kansas Medical Center. Location: Crown Center Hotel, Kansas City, Missouri. Credit: AMA, AAFP, AANA. Contact: Eileen Buttron, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103.

TWELFTH ANNUAL FAMILY PRACTICE SYMPOSIUM — April 29-30, 1987. Sponsor: University of Kansas Medical Center. Location: Crown Center Hotel, Kansas City, Missouri. Credit: AMA, AAFP. Contact: Eileen Buttron, University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103, (913) 588-4494.

ANTICOAGULANT AND ANTITHROMBOTIC THERAPY: STATE OF THE ART — April 25, 1987. Sponsored by the University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow, Kansas City, Kansas 66103. Location: Alameda Plaza Hotel. Credit: Category I AMA, AAFP, CNE. Contact Eileen Buttron, University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103 (913) 588-4480.

THIRTY-FIRST ANNUAL INFECTIOUS DISEASES SYMPOSIUM — May 1, 1987. Sponsor: University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow, Kansas City, Kansas 66103. Location: Crown Center Hotel. Credit: Category I AMA, AAFP. Contact: Eileen Buttron, University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103, (913) 588-4494.

KANSAS MEDICINE — May 15, 1987 — Sponsor: University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, KS 66103. Credit: AMA and AAFP. Location: Battendorf Auditorium, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103. Contact: Eileen Buttron, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103. 913/588-4494.

INTEROPERATIVE RADIATION: A NEW COMBINED TREATMENT APPROACH TO CANCER — July 18, 1987. Sponsored and held at by the University of Kansas Medical Center, Kansas City, Kansas. Credit: AMA, AAFP, CNE. Contact: Eileen Buttron, University of Kansas Medical Center Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103 (913) 588-4480

AMA News Notes

Serious constitutional questions are raised by provisions of the new Medicare law that require physicians to make almost immediate decisions on whether to participate, the AMA cautioned Health and Human Services Secretary Otis R. Bowen, M.D.

In a letter personally delivered to Dr. Bowen by AMA Executive Vice President James H. Sammons, M.D., the AMA urged delaying the implementation of Section 9331 of the Omnibus Budget Reconciliation Act (OBRA) until carriers can provide physicians with the information necessary to make informed decisions.

Dr. Sammons earlier had delivered the same message to William Roper, M.D., administrator of the Health Care Financing Administration.

"The AMA believes that in requiring physicians to make decisions based on information that carriers have not provided, OBRA raises fundamental questions under the due process clause of the Fifth Amendment," the letter to Dr. Bowen stated. "Moreover, the confusion caused among physicians by OBRA is so pervasive that the enforcement of (it) at this time would raise serious constitutional issues."

The letter emphasized that physicians have not been provided with information necessary to comply with the complex new OBRA reimbursement provisions, and that they are experiencing difficulty in "deciphering" the information that they have received. Although it did not say so directly, the letter cited grounds for a potential lawsuit challenging the legality of any hasty implementation of the Section 9331 provisions.

* * *

James S. Todd, M.D., AMA senior deputy executive vice president, joined others in a meeting with HHS Secretary Otis Bowen, M.D., and members of his Liability Task Force. Dr. Todd asked for a meaningful federal response to the liability crisis. HHS staff is drafting an action agenda to be presented to Dr. Bowen within 30 days.

* * *

The AMA has published a newly updated handbook to help primary care physicians and other health professionals diagnose and manage the problems of the mentally retarded.

The *AMA Handbook on Mental Retardation* is a revised edition of a classic AMA text on this topic. Written by physicians for physicians, the new guide interprets clinical issues surrounding mental retardation, discussing current definitions and classifications, medical and psychological assessment, and case management.

The book explores living arrangements, educational rights, and employment opportunities for mentally retarded people, and examines biological and non-biological factors involved in mental retardation. The text focuses not only on the needs of children, but also on community services and vocational training available to mentally retarded adults.

Those wishing to order the book, which costs \$16.50 per copy, should write to AMA Book and Pamphlet Fulfillment OP-314, P.O. Box 10946, Chicago, Ill., 60610-0946, or call, toll free, (800) 621-8335; in Illinois, call collect, (312) 645-4987.

* * *

The Reagan Administration's proposed 40% Medicare Part B premium increase violates the President's pledge of no revenue increases, charges Edward R. Roybal (D, Calif.), chairman of the House Select Committee on Aging.

He also criticized the Administration's proposal to cap Medicaid expenditures at \$6.6 billion, below the expected 1992 costs. "The administration strikes again at poor, elderly, and disabled Americans through its proposals," he said.

"Congress will vigorously oppose any attempt to raise the Medicare premium beyond the current 25% level or to slash the already decimated Medicaid program," Roybal added.

* * *

140
120
100
80
60
40
20
0

130

110

90

70

50

30

10

In mild to moderate hypertension

**THE FIRST
ONCE DAILY**

**CALCIUM
CHANNEL
BLOCKER**

NEW
ONCE DAILY



ISOPTIN^{SR}*

(verapamil HCl/Knoll)

240 mg scored, sustained-release tablets



JAMES B.

38, black male, heavy smoker. Prescribed a diuretic by another physician last year for hypertension.

YOUR CONCERNS

Presents with "smoker's cough." Workup reveals a BP of 150/107.

A LOGICAL CHOICE FOR CONTROL OF HIS BP

ISOPTIN[®] (verapamil HCl/Knoll) because...

- Black hypertensives often have low plasma renin activity and generally do not respond favorably to beta blockers.
- Beta blockers may increase the likelihood of bronchospasm.



THOMAS G.

70, asthmatic. In the past, BP adequately controlled with 25 mg hydrochlorothiazide daily.

YOUR CONCERNS

Today patient presents with symptoms of gout. Workup reveals high uric acid level, low serum potassium, and BP elevated to 180/98.

A LOGICAL CHOICE FOR CONTROL OF HIS BP

ISOPTIN[®] (verapamil HCl/Knoll) because...

- Unlike diuretics, ISOPTIN will not decrease serum potassium levels or elevate uric acid levels.
- Unlike beta blockers, ISOPTIN can be used safely in asthma and COPD patients.

ALICE W.

65, diabetic, overweight. Her BP has elevated to 190/98.

YOUR CONCERNS

She's on daily insulin.

A LOGICAL CHOICE FOR CONTROL OF HER BP

ISOPTIN[®] (verapamil HCl/Knoll) because...

- Unlike most beta blockers and diuretics, ISOPTIN has no adverse effects on serum glucose levels.
- Unlike most beta blockers, ISOPTIN does not mask the symptoms of hypoglycemia.



JOHN K.

42, Annual physical uncovered diastolic BP of 102... confirmed on three successive office visits. Unresponsive to nonpharmacologic intervention.

YOUR CONCERNS

Salesman, spends many hours of his working day in car... total cholesterol level 300, HDL 35.

A LOGICAL CHOICE FOR CONTROL OF HIS BP

ISOPTIN[®] (verapamil HCl/Knoll) because...

- Unlike diuretics, ISOPTIN does not cause urinary urgency.
- Unlike either beta blockers or diuretics, ISOPTIN will not adversely affect his already seriously compromised lipid profile.
- Unlike with propranolol, fatigue and impotence are rarely reported.



**Antihypertensive therapy you
and your patients can live with**

*A product of Knoll research.

THE FIRST ONCE DAILY CALCIUM CHANNEL BLOCKER

ISOPTIN® SR (verapamil HCl/Knoll) 240 mg scored, sustained-release tablets

CONTRAINDICATIONS: 1) Severe left ventricular dysfunction (see WARNINGS). 2) Hypotension (less than 90 mmHg systolic pressure) or cardiogenic shock. 3) Sick sinus syndrome or 2nd or 3rd degree AV block (except in patients with a functioning artificial ventricular pacemaker).

WARNINGS: **Heart Failure:** ISOPTIN should be avoided in patients with severe left ventricular dysfunction (see DRUG INTERACTIONS). Patients with milder ventricular dysfunction should, if possible, be controlled before verapamil treatment. **Hypotension:** ISOPTIN (verapamil HCl) may produce occasional symptomatic hypotension. **Elevated Liver Enzymes:** Elevations of transaminases with and without concomitant elevations in alkaline phosphatase and bilirubin have been reported. Periodic monitoring of liver function in patients receiving verapamil is therefore prudent. **Accessory Bypass Tract (Wolff-Parkinson-White):** Patients with paroxysmal and/or chronic atrial flutter or atrial fibrillation and a coexisting accessory AV pathway have developed increased antegrade conduction across the accessory pathway producing a very rapid ventricular response or ventricular fibrillation after receiving intravenous verapamil. While this has not been reported with oral verapamil, it should be considered a potential risk. Treatment is usually D.C.-cardioversion. **Atrioventricular Block:** The effect of verapamil on AV conduction and the SA node may cause asymptomatic 1st degree AV block and transient bradycardia. Higher degrees of AV block, while infrequent (0.8%), may require a reduction in dosage or, in rare instances, discontinuation of verapamil HCl. Patients with Hypertrophic Cardiomyopathy (IHSS): Although verapamil has been used in the therapy of patients with IHSS, severe cardiovascular decompensation and death have been noted in this patient population.

PRECAUTIONS: **Impaired Hepatic or Renal Function:** Verapamil is highly metabolized by the liver with about 70% of an administered dose excreted in the urine. In patients with impaired hepatic or renal function verapamil should be administered cautiously and the patients monitored for abnormal prolongation of the PR interval or other signs of excessive pharmacological effects (see OVERDOSAGE).

Drug Interactions: **Beta Blockers:** Concomitant use of ISOPTIN and oral beta-adrenergic blocking agents may be beneficial in certain patients with chronic stable angina or hypertension, but available information is not sufficient to predict with confidence the effects of concurrent treatment in patients with left ventricular dysfunction or cardiac conduction abnormalities. **Digitalis:** Clinical use of verapamil in digitalized patients has shown the combination to be well tolerated if digoxin doses are properly adjusted. However, chronic verapamil treatment increases serum digoxin levels by 50 to 75% during the first week of therapy and this can result in digitalis toxicity. Upon discontinuation of ISOPTIN (verapamil HCl), the patient should be reassessed to avoid underdigitalization. **Antihypertensive Agents:** Verapamil administered concomitantly with oral antihypertensive agents (e.g., vasodilators, angiotensin-converting enzyme inhibitors, diuretics, beta blockers, prazosin) will usually have an additive effect on lowering blood pressure. Patients receiving these combinations should be appropriately monitored. **Disopyramide:** Disopyramide should not be administered within 48 hours before or 24 hours after verapamil administration. **Quinidine:** In patients with hypertrophic cardiomyopathy (IHSS), concomitant use of verapamil and quinidine resulted in significant hypotension. There has been a report of increased quinidine levels during verapamil therapy. **Nitrates:** The pharmacologic profile of verapamil and nitrates as well as clinical experience suggest beneficial interactions. **Cimetidine:** Two clinical trials have shown a lack of significant verapamil interaction with cimetidine. A third study showed cimetidine reduced verapamil clearance and increased elimination to 1/2. **Anesthetic Agents:** Verapamil may potentiate the activity of neuromuscular blocking agents and inhalation anesthetics. **Carbamazepine:** Verapamil may increase carbamazepine concentrations during combined therapy. **Rifampin:** Therapy with rifampin may markedly reduce oral verapamil bioavailability. **Lithium:** Verapamil may lower lithium levels in patient on chronic oral lithium therapy. **Carcinogenesis, Mutagenesis, Impairment of Fertility:** There was no evidence of a carcinogenic potential of verapamil administered to rats for two years. Verapamil was not mutagenic in the Ames test. Studies in female rats did not show impaired fertility. Effects on male fertility have not been determined. **Pregnancy (Category C):** There are no adequate and well-controlled studies in pregnant women. ISOPTIN crosses the placental barrier and can be detected in umbilical vein blood at delivery. This drug should be used during pregnancy, labor, and delivery, only if clearly needed. **Nursing Mothers:** ISOPTIN is excreted in human milk, therefore, nursing should be discontinued while verapamil is administered. **Pediatric Use:** Safety and efficacy of ISOPTIN in children below the age of 18 years have not been established.

ADVERSE REACTIONS: Constipation 8.4%, dizziness 3.5%, nausea 2.7%, hypotension 2.5%, edema 2.1%, headache 1.9%, CHF/pulmonary edema 1.8%, fatigue 1.7%, bradycardia 1.4%, 3° AV block 0.8%, flushing 0.1%, elevated liver enzymes (see WARNINGS). The following reactions, reported in less than 1.0% of patients, occurred under conditions (open trials, marketing experience) where a causal relationship is uncertain; they are mentioned to alert the physician to a possible relationship: angina pectoris, arthralgia and rash, AV block, blurred vision, cerebrovascular accident, chest pain, claudication, confusion, diarrhea, dry mouth, dyspnea, ecchymosis or bruising, equilibrium disorders, exanthema, gastrointestinal distress, gingival hyperplasia, gynecomastia, hair loss, hyperkeratosis, impotence, increased urination, insomnia, macules, muscle cramps, myocardial infarction, palpitations, paresthesia, psychotic symptoms, purpura (vasculitis), shakiness, somnolence, spotty menstruation, sweating, syncope, urticaria. **Treatment of Acute Cardiovascular Adverse Reactions:** Whenever severe hypotension or complete AV block occur following oral administration of verapamil, the appropriate emergency measures should be applied immediately, e.g., intravenously administered isoproterenol HCl, levarterenol bitartrate, atropine (all in the usual doses), or calcium gluconate (10% solution). If further support is necessary, inotropic agents (dopamine or dobutamine) may be administered. Actual treatment and dosage should depend on the severity and the clinical situation and the judgment and experience of the treating physician.

OVERDOSAGE: Treatment of overdosage should be supportive. Beta-adrenergic stimulation or parenteral administration of calcium solutions may increase calcium ion flux across the slow channel, and have been used effectively in treatment of deliberate overdosage with verapamil. Clinically significant hypotensive reactions or fixed high degree AV block should be treated with vasopressor agents or cardiac pacing, respectively. Asystole should be handled by the usual measures including cardiopulmonary resuscitation.

Knoll Pharmaceuticals
A Unit of BASF K&F Corporation
Whippany, New Jersey 07981



BASF Group

©1986, BASF K&F Corporation

2474/11/86

Printed in U.S.A.

AMA News Notes

(Continued from page 24-A)

An extensive public relations campaign will be initiated for the purpose of making Health Policy Agenda THE focus of national discussion on health care. The HPA Implementation Committee retained Wexler, Reynolds, Harrison and Schule, a firm specializing in public affairs, and Burson-Marsteller, a public relations firm, to develop and execute this campaign.

For the past two months staff from the public affairs firm have been visiting key Members of Congress to apprise them of the report, the extensive expert input that went into its development and on how it can be used in establishing national health policy. Recently members of the HPA Implementation Committee and its public affairs consultants held briefings for staffs of the six Congressional health and appropriation committees.

Here are some of the activities currently planned by the public affairs and public relations consultants to create broad-based governmental, thought-leader and public awareness of the HPA:

- * Direct contact with state and federal legislators to establish the HPA as an important player in the formulation of health policy.
- * An ongoing News Bureau to ensure a consistent placement of HPA-related editorials, articles, and broadcast coverage.
- * An ongoing Speakers Bureau to place HPA spokespersons before key audiences.
- * A 1988 Presidential Candidate Forum where candidates seeking the Presidential nomination in both parties will deliver their own health policy statements using the HPA as the principal vehicle for discussion (early 1988)
- * A national teleconference (or series of state-wide teleconferences) to educate and involve hundreds of state and local decision makers and opinion makers on the HPA.
- * The development of collateral print materials, audio-visual presentations and media kits to educate and motivate a wide audience.

Nebraska Medical Association Officers and Commissions

OFFICERS

Hiram R. Walker, M.D., Kearney President
 L. Dwight Cherry, M.D., Lincoln President-Elect
 Robert F. Shapiro, M.D., Lincoln Secretary-Treasurer
 William L. Schellpeper, Lincoln Executive Director
 James K. Ruigh, Lincoln Assistant Executive Director

BOARD OF DIRECTORS

Hiram R. Walker, Kearney Chairman
 L. Dwight Cherry, M.D., Lincoln Vice-Chairman
 Robert F. Shapiro, M.D., Lincoln Secretary-Treasurer
 Francis D. Donahue, M.D., Omaha Past President
 Paul E. Collicott, M.D., Lincoln
 Richard A. Raymond, M.D., O'Neill
 Donald J. Pavelka, M.D., Omaha
 Alvin A. Armstrong, M.D., Scottsbluff
 Richard H. Meissner, M.D., Omaha
 Stanley M. Truhlsen, M.D., Omaha

COMMISSION ON ASSOCIATION AFFAIRS

Harry W. McFadden, M.D., Chairman Omaha
 R. A. Blatny, M.D., Fairbury
 Stuart P. Embury, M.D., Holdrege
 Joel T. Johnson, M.D., Kearney
 Bernard L. Kratochvil, M.D., Omaha
 Walter O'Donohue, M.D., Omaha
 Joseph E. Stichter, M.D., Lincoln
 R. C. Weldon, M.D., Nebraska City

SCIENTIFIC SESSIONS COMMITTEE

Sushil S. Lacy, M.D., Chairman Lincoln
 Donald E. Waltemath, M.D., Convention Chairman Lincoln
 David L. Bacon, M.D., Kearney
 Paul J. Bender, Jr., M.D., Omaha
 Michael A. Breiner, M.D., Lincoln
 Mark A. Christensen, M.D., Omaha
 Richard A. Hranac, M.D., Kearney
 Donald J. Larson, M.D., Lincoln
 Donna K. Nelson, M.D., Omaha
 Richard M. Tempero, M.D., Omaha

COMMISSION ON MEDICAL SERVICES

William L. Rumbolz, M.D., Chairman Omaha
 Patrick E. Clare, M.D., Lincoln
 C. J. Cornelius, Jr., M.D., Sidney
 Richard A. Hranac, M.D., Kearney
 F. William Karrer, M.D., Omaha
 Dale E. Michels, M.D., Lincoln
 Robert G. Osborne, M.D., Lincoln
 Richard J. Petersen, M.D., Omaha
 Kenton L. Shaffer, M.D., Kearney

AD-HOC COMMITTEE ON ATHLETIC MEDICINE

Patrick E. Clare, M.D., Chairman Lincoln
 Stanley M. Bach, M.D., Omaha
 Warren G. Bosley, M.D., Grand Island
 S. I. Fuenning, M.D., Lincoln
 Jack K. Lewis, M.D., Omaha
 Morris B. Mellon, M.D., Omaha
 Richard A. Raymond, M.D., O'Neill
 Wm. Michael Walsh, M.D., Omaha
 George F. Sullivan, R.P.T., Lincoln
 Wayne Wagner, A.T.C., Omaha

AD-HOC COMMITTEE ON MATERNAL & CHILD HEALTH

Kenton L. Shaffer, M.D., Chairman Kearney

Section on Maternal Mortality Review

George M. Adam, M.D., Hastings
 James G. Cummins, M.D., Omaha
 L. Palmer Johnson, M.D., Lincoln
 William Rayburn, M.D., Omaha
 William L. Rumbolz, M.D., Omaha
 Larry Wilson, M.D., Gothenburg

Section on Perinatal Mortality Review

Lawrence C. Bausch, M.D., Lincoln
 Stacie R. Bleicher, M.D., Lincoln
 Robert S. Grant, M.D., Lincoln
 Robert M. Nelson, M.D., Omaha

AD-HOC COMMITTEE ON PSYCHIATRY

Robert G. Osborne, M.D., Chairman Lincoln
 Jehangir B. Bastani, M.D., Lincoln
 Klaus Hartmann, M.D., Lincoln
 Harry C. Henderson, Jr., M.D., Omaha
 J. Whitney Kelley, M.D., Omaha
 William B. Long, M.D., Omaha
 Merle Sjogren, M.D., Kearney

AMA Delegates — C. J. Cornelius, Jr., M.D.,
 Sidney; John D. Coe, M.D., Omaha; AMA Alter-
 nate Delegates — Louis J. Gogela, M.D., Lincoln;
 Blaine Y. Roffman, M.D., Omaha.

AD-HOC COMMITTEE ON GERIATRICS

Richard A. Hranac, M.D., Chairman Kearney
 Ronald L. Asher, M.D., North Platte
 J. Whitney Kelley, M.D., Omaha
 Jane F. Potter, M.D., Omaha
 William J. Reedy, M.D., Omaha
 John A. Ursick, M.D., Omaha
 Vernon G. Ward, M.D., Omaha
 Frederick Youngblood, M.D., Omaha

AD-HOC COMMITTEE ON ALTERNATE HEALTH PLANS I

Carl J. Cornelius, Jr., M.D., Chairman Sidney
 Warren G. Bosley, M.D., Grand Island
 Dale W. Ebers, M.D., Lincoln
 Vernon F. Garwood, M.D., Lincoln
 Richard H. Meissner, M.D., Omaha

Ex-Officio:

Michael J. Haller, M.D., Omaha
 Roger D. Mason, M.D., Omaha

AD-HOC COMMITTEE ON ALTERNATE HEALTH PLANS II

Dale E. Michels, M.D., Chairman Lincoln
 Lonnie S. Albers, M.D., Lincoln
 Audrey A. Paulman, M.D., Omaha
 Dwaine J. Peetz, Jr., M.D., Omaha
 Harlan C. Shriner, M.D., Lincoln
 Sebastian J. Troia, M.D., Omaha

COMMITTEE ON HEALTH PLANNING

Carl J. Cornelius, Jr., M.D., Chairman Sidney
 Gordon D. Adams, M.D., Norfolk
 Lewiston W. Birkmann, M.D., Lincoln
 James S. Carson, M.D., McCook
 Chris C. Caudill, M.D., Lincoln
 Allen D. Dvorak, M.D., Omaha
 Dale W. Ebers, M.D., Lincoln
 Louis J. Gogela, Jr., M.D., Beatrice
 Roger D. Mason, M.D., Omaha
 Donald F. Prince, M.D., Minden
 C. Lee Retelsdorf, M.D., Omaha
 Thomas H. Wallace, M.D., Gordon

AD-HOC COMMITTEE ON TUMOR REGISTRY

F. William Karrer, M.D., Chairman Omaha
 Elvin G. Brown, M.D., Hastings
 John H. Casey, M.D., Lincoln
 James R. Commers, M.D., Omaha
 John B. Davis, M.D., Omaha
 Howard A. Dinsdale, M.D., Lincoln
 C. Lee Retelsdorf, M.D., Omaha
 Ron D. Scott, M.D., Kearney

AD-HOC COMMITTEE ON LOW LEVEL RADIATION WASTE DISPOSAL

Richard J. Petersen, M.D., Chairman Omaha
 Allen D. Dvorak, M.D., Omaha
 Stanley Jaeger, M.S., Omaha
 Martin R. Lohff, M.D., Omaha
 Wm. H. Northwall, M.D., Kearney
 Merton A. Quaife, M.D., Omaha
 Jerald R. Schenken, M.D., Omaha
 Paul Steffes, M.D., Omaha

COMMISSION ON LEGISLATION AND GOVERNMENTAL AFFAIRS

Craig L. Uhrauer, M.D., Chairman Lincoln
 Ronald L. Klutman, M.D., Co-Chairman Columbus
 Dwaine J. Peetz, M.D., Advisor Neligh
 Judith A. Butler, M.D., Superior
 James H. Dunlap, M.D., Norfolk
 Dale W. Ebers, M.D., Lincoln
 Charles Gregorius, M.D., Lincoln
 Bruce W. Henricks, M.D., Fremont
 Barbara M. Heywood, M.D., Papillion
 John T. McGreer, III, M.D., Lincoln
 Dennis G. O'Leary, M.D., Omaha
 Robert G. Osborne, M.D., Lincoln
 Richard A. Raymond, M.D., O'Neill
 Herbert E. Reese, M.D., Lincoln
 Blaine Y. Roffman, M.D., Omaha
 Jerald R. Schenken, M.D., Omaha
 Bruce D. Smith, M.D., Kearney

Todd S. Sorensen, M.D. Scottsbluff
 Richard B. Svehla, M.D. Omaha
 Mylan R. VanNewkirk, M.D. Scottsbluff
 Timothy O. Wahl, M.D. Omaha

AD-HOC COMMITTEE ON HEALTH POLICY STATEMENTS

C. Lee Retelsdorf, M.D., Chairman Omaha
 Daniel S. Durrie, M.D. Omaha
 Darroll J. Loschen, M.D. York
 Dale E. Michels, M.D. Lincoln
 Charles S. Wilson, M.D. Lincoln
 Frederick Youngblood, M.D. Omaha

AD-HOC COMMITTEE ON PROFESSIONAL LIABILITY

James H. Dunlap, M.D., Chairman Norfolk
 David L. Bacon, M.D. Kearney
 Warren G. Bosley, M.D. Grand Island
 Ernest W. Chupp, M.D. Omaha
 F. M. Gawecki, M.D. Papillion
 Dwaine J. Peetz, M.D. Neligh
 Herbert E. Reese, M.D. Lincoln
 Blaine Y. Roffman, M.D. Omaha

COMMISSION ON MEDICAL EDUCATION

Frederick F. Paustian, M.D., Chairman Omaha
 Robert L. Bass, M.D. Elkhorn
 Patrick E. Brookhouser, M.D. Omaha
 Christopher P. Crotty, M.D. Omaha
 Charles F. Damico, M.D. Hastings
 Charles A. Dobry, M.D. Omaha
 A. Dean Gilg, M.D. Lincoln
 William E. Lundak, M.D. Lincoln
 Richard L. O'Brien, M.D. Omaha
 Dwaine J. Peetz, Jr., M.D. Omaha
 Joseph C. Scott, M.D. Omaha
 Robert H. Waldman, M.D. Omaha

AD-HOC COMMITTEE ON HEALTH EDUCATION

Warren G. Bosley, M.D., Chairman Grand Island
 Stephen J. Lanspa, M.D. Omaha
 Paul H. Phillips, M.D. Scottsbluff
 Eileen C. Vautravers, M.D. Lincoln
 Wesley G. Wilhelm, M.D. Omaha
 Gregg F. Wright, M.D. Lincoln

COMMISSION ON PUBLIC AFFAIRS

Rodney S. W. Basler, M.D., Chairman Lincoln
 H. Jeffrey Deeths, M.D. Omaha
 Herbert D. Feidler, M.D. Norfolk
 Edward E. Gatz, M.D. Omaha
 Donald T. Glow, M.D. Omaha
 John J. Hoelsing, M.D. Omaha
 Roger P. Massie, M.D. Plainview
 Donald E. Mathews, M.D. Lincoln
 Harlan C. Shriner, M.D. Lincoln
 F. Thomas Waring, M.D. Fremont

COMMISSION ON HOSPITAL MEDICAL STAFF

Steven A. Schwid, M.D., Chairman Omaha
 Richard A. Hranac, M.D. Kearney
 Harry E. Keig, M.D. Papillion
 Glen F. Lau, M.D. Lincoln
 Barney B. Rees, M.D. Omaha
 Joseph G. Rogers, M.D. Lincoln
 Gerald Rounsberg, M.D. North Platte
 William A. Shiffermiller, M.D. Omaha
 Stephen D. Torpy, M.D. Omaha

COUNCILOR DISTRICTS AND COUNTIES

First District: Councilor: Stanley M. Truhlsen, Omaha. Counties: Douglas, Sarpy.
 Second District: Councilor: Howard A. Dinsdale, Lincoln. Counties: Cass, Lancaster, Otoe.
 Third District: Councilor: C. T. Frerichs, Beatrice. Counties: Gage, Johnson, Nemaha, Pawnee, Richardson.
 Fourth District: Councilor: Roger Massie, Plainview. Counties: Antelope, Cedar, Cuming, Dakota, Dixon, Knox, Madison, Pierce, Stanton, Thurston, Wayne.
 Fifth District: Councilor: William Chleborad, M.D., Fremont. Counties: Boone, Burt, Colfax, Dodge, Merrick, Nance, Platte, Washington.
 Sixth District: Councilor: Robert Herpolsheimer, M.D., Seward. Counties: Butler, Hamilton, Polk, Saunders, Seward, York.
 Seventh District: Councilor: Robert Quick, M.D., Crete. Counties: Clay, Fillmore, Jefferson, Nuckolls, Saline, Thayer.
 Eighth District: Councilor: Floyd H. Shiffermiller, Ainsworth. Counties: Boyd, Brown, Cherry, Holt, Keya Paha, Rock, Sheridan.
 Ninth District: Councilor: Stanley Nabity, Grand Island. Counties: Blaine, Buffalo, Custer, Dawson, Garfield, Grant, Greeley, Hall, Hooker, Howard, Loup, Sherman, Thomas, Valley, Wheeler.
 Tenth District: Councilor: David R. Little, M.D., Hastings. Counties: Adams, Chase, Dundy, Franklin, Frontier, Furnas, Gosper, Harlan, Hayes, Hitchcock, Kearney, Phelps, Red Willow, Webster.
 Eleventh District: Councilor: Donald E. Fischer, North Platte. Counties: Arthur, Deuel, Garden, Keith, Lincoln, Logan, McPherson, Perkins.
 Twelfth District: Councilor: Donald E. Wilkinson, Alliance. Counties: Banner, Box Butte, Cheyenne, Dawes, Kimball, Morrill, Scotts Bluff, Sioux.

NEBRASKA MEDICAL ASSOCIATION Councilor Districts and Component County Medical Societies COMPONENT COUNTY MEDICAL SOCIETIES

COUNTY	PRESIDENT	SECRETARY-TREASURER
Adams	Kevin Wycoff, Hastings	Richard French, Hastings
Antelope-Pierce	Kenneth Peters, Plainview	David Johnson, Osmond
Box Butte	Wendell Fairbanks, Alliance	Chris Wilkinson, Alliance
Buffalo	John Schulte, Kearney	Gerry Jensen, Kearney
Butler	Victor Thoendel, David City	Jack Kaufmann, David City
Cass	R. R. Anderson, Nehawka	Glen K. Knosp, Elmwood
Cheyenne-Kimball-Deuel	James Thayer, Sidney	Clinton Dorwart, Sidney
Cuming		Gordon Moshman, West Point
Custer	Loren Jacobsen, Broken Bow	N. Leon Books, Broken Bow
Dawson		Rodney Sitorius, Cozad
Dodge	Rod Koerber, Fremont	W. B. Eaton, Fremont
Five	Willis L. Wiseman, Wayne	Robert Benthack, Wayne
Four	Tom Martin, Ord	Otis Miller, Ord
Gage	Alan Langvardt, Beatrice	Louis J. Gogela, Jr., Beatrice
Hall	L. W. Hake, Grand Island	Gordon Francis, Grand Island
Hamilton	M. D. Jobman, Aurora	G. D. Penner, Aurora
Holt & Northwest	Melvin Campbell, Ainsworth	John Bryd, Valentine
Jefferson	Gordon O. Johnson, Fairbury	R. A. Blatny, Fairbury
Knox	D. M. Laflan, Creighton	D. J. Nagenzast, Bloomfield
Lancaster	C. L. Barton, Lincoln	M. A. Breiner, Lincoln
Lincoln	Dell Shepherd, North Platte	Timothy O'Holleran, North Platte
Madison	G. Tom Surber, Norfolk	C. Robert Adams, Norfolk
Metropolitan Omaha	Jerald R. Schenken, Omaha	F. F. Paustian, Omaha
Northeast	G. Tom Surber, Norfolk	C. Robert Adams, Norfolk
Northwest	Joel Hutchens, Gordon	R. H. Rasmussen, Chadron
Otoe	Dean R. Thomson, Nebraska City	Paul R. Madison, Nebraska City
Keith-Perkins-Chase	Berl W. Spencer, Ogallala	E. A. Holyoke, Ogallala
Platte-Loup Valley	Arthur Liebenritt, Columbus	Dwight Rickard, Columbus
Saline		Robert E. Tuma, Crete
Sarpy	Fred Gawecki, Papillion	Fred Schwartz, Papillion
Saunders	I. M. French, Wahoo	John E. Hansen, Jr., Wahoo
Scotts Bluff	Lowell Stratton, Mitchell	Von Roberts, Scottsbluff
Seward	Paul Plessman, Seward	Van Vahle, Seward
South Central	Jeff Hollins, Geneva	Chas. F. Ashby, Geneva
Southeast Nebr.	Gary Ens, Auburn	George Voigtlander, Pawnee City
Southwest Nebr.	David A. Allerheilgen, McCook	E. C. Beyer, McCook
Washington-Burt	H. Neal Sievers, Blair	K. C. Bagby, Blair
York	James D. Bell, York	Darroll J. Loschen, York

Physicians' Classified

Advertisements in this column are run at a rate of twenty cents per word with a minimum of \$10.00 per insertion. Copy must be received by the fifth of the month preceding the date of publication and should not exceed 50 words. Each advertisement will be taken out following its first appearance unless otherwise instructed. When numbers follow advertisements, replies should be addressed in care of The Nebraska Medical Journal, 1512 FirTier Bank Building, Lincoln, Nebraska 68508.

FAMILY PRACTICE: North Platte, NE. Practice space available due to health problems. Excellent opportunity to associate with five board-certified physicians. Come to where the West begins! Call Gary L. Conell, M.D., 810 Reid, North Platte, NE 69101. Office 308-534-3222; Home 308-534-4109.

EXCELLENT OPPORTUNITIES FOR: Otorhinolaryngologist, Obstetrician/Gynecologist, Dermatologist, Psychiatrist, Endocrinologist, Radiologist, Orthopedist, and General/Family Practitioner. Excellent opportunity for physicians in Los Angeles suburb to join 80 member multispecialty medical group. Large fee-for-service and prepaid practice, no Medi-Cal. Excellent compensation program based on guarantee plus incentive, profit sharing and pension plan. Group provides health, dental, life and malpractice. Partnership in real estate and medical corporation available. See our Display Ad in this publication. Send CV to William Shaw, Associate Administrator, Mullikin Medical Center, 17821 S. Pioneer Blvd., Artesia, CA 90701.

FAMILY PRACTICE PHYSICIAN NEEDED: Established need for a family practice physician to join seven man group in beautiful Northwest Iowa. Modern 10,000 sq. ft. clinic building is next door to 72-bed JCAH accredited county hospital. Unusually progressive community of 10,000 has economy far above the state average. Storm Lake offers 3,000 acre lake, 85 acres of park and recreation, and is home to Buena Vista College. One hour from Sioux City, and two hours from Omaha & Des Moines. Generous guarantee with immediate incentive plan, paid malpractice insurance, liberal vacation and seminar time, limited call requirements with seven other physicians and no HMO's in the area. Contact Darrell Pritchard, Manager, Buena Vista Clinic, P.C., 620 Northwestern Drive, Storm Lake, IA 50588. Call collect 712-732-5030.

OPPORTUNITY: Be a "winter Texan" internist. Enjoy the warm, beautiful Rio Grande Valley, while practicing internal medicine with an internist. Texas license essential. Salary and living accommodations. Send curriculum vitae to 104 South Bryan Road, Mission, TX 78572 or contact (512) 585-2783 for more information.

OPENING: Family/General Practice physician in the position of Medical Director at the Hastings Regional Center. Board eligible or board certified physician in the area of family practice, with family or general practice experience. Contact Michael J. Sheehan, Facility Administrator, Hastings Regional Center, P.O. Box 579, Hastings, NE 68901, (402) 463-2471.



Drug/Alcohol/Emotional/Other Health Problems

HELP IS AVAILABLE

FOR YOU

FOR A MEMBER OF YOUR FAMILY

FOR A PROFESSIONAL, FRIEND OR COLLEAGUE

Call

The Physician's Advocacy Committee
(Nebraska Medical Association)

Strictly Confidential — Professional — Effective

For information call:

402-393-3216

(You do not have to give your name.)



ADVERTISER'S INDEX

A	
Auto-Med Systems	4
Ayerst Laboratories	13, 14, 15, 16, 26, 27, 28
D	
Donley Medical Supply	6
G	
Glaxo/Roche	19, 20, 21, 22
I	
Info-Builders, Inc.	18
K	
Knoll Pharmaceuticals	29, 30, 31
L	
Eli Lilly & Company	7
M	
Mullikin Medical Centers	3
N	
Norfolk Printing Co., Inc.	6
R	
Roche Laboratories	35, 36
Roerig	8, 9, 10
U	
Upjohn Company	25

YOUR ROCHE REPRESENTATIVE WOULD LIKE YOU TO HAVE SOMETHING THAT WILL ...

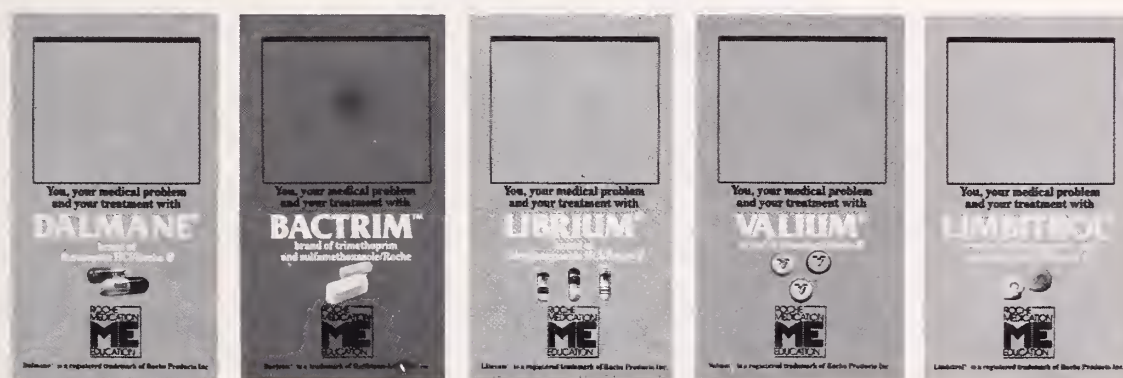


- ... improve patient satisfaction with office visits
- ... improve patient compliance with your instructions
- ... reduce follow-up calls to clarify instructions

The new Roche product books

- Offer a supplement to, not a substitute for, patient contact
- Support your specific instructions to the patient
- Provide a long-term reinforcement of your oral counseling

Because you are the primary source of medical information for your patients, we invite you to look over the Roche Product Booklets shown below and ask your Roche representative for a complimentary supply of those applicable to your practice.



Medicines that matter from people who care

COMMITTED TO EXCELLENCE



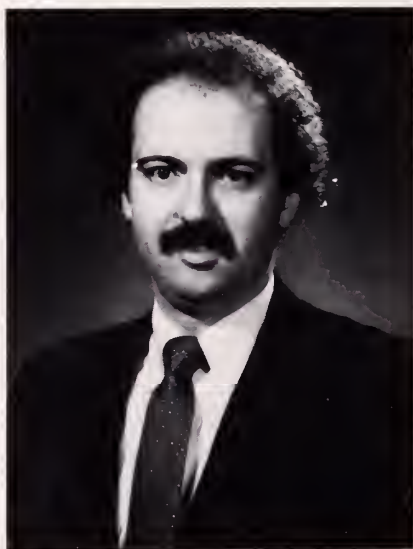
Presenting the winners of the 1987 Roche President's Achievement Awards

Hoffmann-La Roche is pleased to honor these outstanding sales representatives, chosen for their unparalleled dedication to the health-care field, professionalism and consistent high level of performance. Please join us in congratulating these exceptional individuals.

LIBRARY

MAR 13 1987

N. J. MED. SOC.
OF MEDICINE



John L. Yost



Turn to the preceding page and find out how your award-winning Roche representative can help both you *and* your patients.

THE NEBRASKA MEDICAL JOURNAL



119
Years



Contents

Editorial

Cranial Magnetic Resonance Imaging and Multiple Sclerosis Lesions <i>John F. Aita, M.D.</i>	101
--	-----

Original Articles

Perinatal Management and Outcome of Very Low Birthweight Infants <i>Leigh Hoppe, R.N., M.S.</i> <i>Joan V. Eggert, M.P.H., M.D.</i> <i>Kristen E. Hoffman, M.D.</i> <i>Larry D. Eggert, M.D.</i>	102
Characteristics of Persons Found Not Guilty by Reason of Insanity <i>Upma Dinghra, M.D.</i> <i>Leonard E. Woytassek, M.D.</i> <i>Klaus Hartmann, M.D.</i>	109

Should Your Children See To Become Physicians? <i>Leif C. Beck, J.D., C.P.B.C.</i>	
---	--

Perinatal Page

Ultrasound Assessment of Umbilical Artery and Vein Blood Flow <i>J. Patrick Lavery, M.D.</i>	115
---	-----

X-Ray of the Month

Traumatic Rupture of the Thoracic Aorta <i>Mary T. Feeney, M.D.</i> <i>James J. Phalen, M.D.</i>	117
--	-----

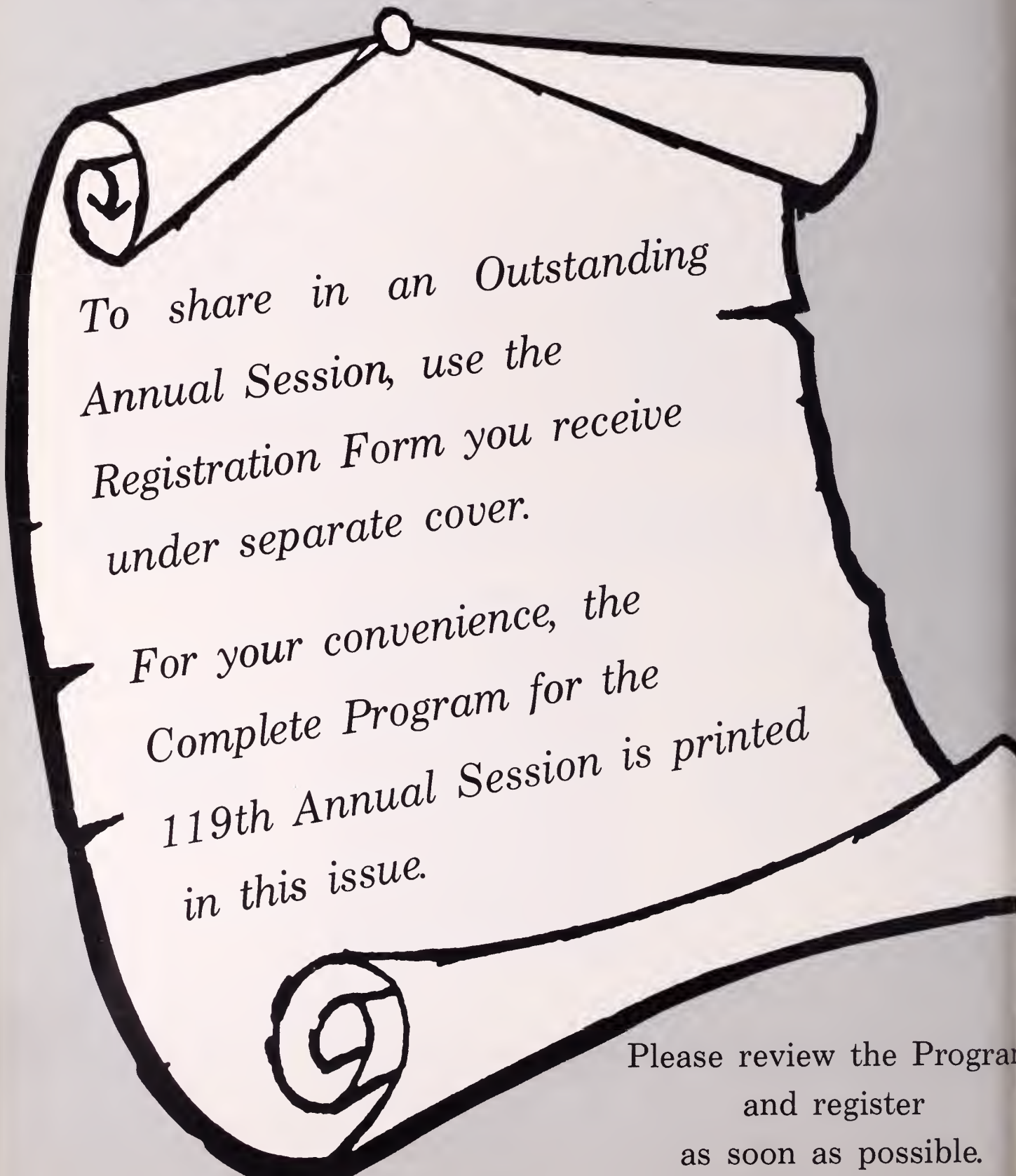
Features

President's Page	119
The Auxiliary	120
UNMC News	121
Letter to the Editor	121
Welcome New Members	122
	122
	123
ogram	127

119th Annual Session

April 24-28, 1987

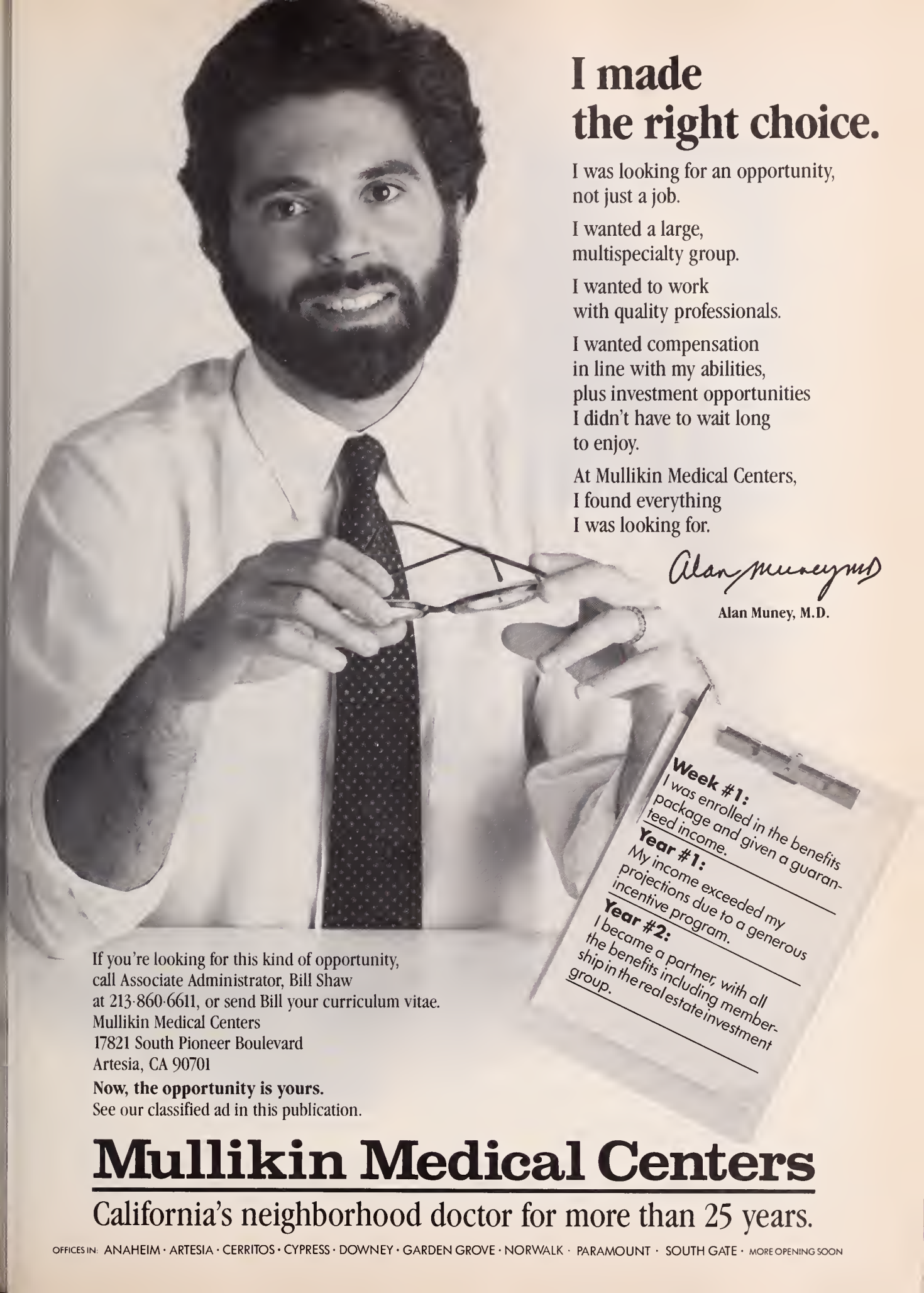
All sessions at Cornhusker Hotel - Lincoln, Nebraska



*To share in an Outstanding
Annual Session, use the
Registration Form you receive
under separate cover.*

*For your convenience, the
Complete Program for the
119th Annual Session is printed
in this issue.*

Please review the Program
and register
as soon as possible.



I made the right choice.

I was looking for an opportunity,
not just a job.

I wanted a large,
multispecialty group.

I wanted to work
with quality professionals.

I wanted compensation
in line with my abilities,
plus investment opportunities
I didn't have to wait long
to enjoy.

At Mullikin Medical Centers,
I found everything
I was looking for.

Alan Muney M.D.

Alan Muney, M.D.

If you're looking for this kind of opportunity,
call Associate Administrator, Bill Shaw
at 213-860-6611, or send Bill your curriculum vitae.
Mullikin Medical Centers
17821 South Pioneer Boulevard
Artesia, CA 90701

Now, the opportunity is yours.
See our classified ad in this publication.

Week #1:
I was enrolled in the benefits
package and given a guaran-
teed income.

Year #1:
My income exceeded my
projections due to a generous
incentive program.

Year #2:
I became a partner, with all
the benefits including member-
ship in the real estate investment
group.

Mullikin Medical Centers

California's neighborhood doctor for more than 25 years.



Jerald R. Schenken, M.D.

**Hear Your
AMA BOARD OF TRUSTEES
REPRESENTATIVE**

JERALD R. SCHENKEN, M.D.

speaking on
"Quality Assurance: The Next Horizon".

He will address the
Socio-Economic Breakfast Meeting
on Tuesday, April 28.

* * * * *

NMA ANNUAL SESSION

April 24-28

Cornhusker Hotel

Lincoln, NE

Reservation forms will be sent in late March.

CLARKSON MEDICAL LECTURE SERIES



CURRENT TRENDS AND CONTROVERSIES IN SURGERY

Friday, May 8, 1987

8 a.m. to 5 p.m.

Clarkson Hospital Storz Pavilion

**Featured speakers include: Robert K. Jarvik, M.D.
Thomas S. Riles, M.D.**

Topics include:

The Artificial Heart

Breast Cancer: Diagnosis, Surgical Management,
Chemotherapy, Radiation Therapy, Reconstructive
Surgery

Carotid Artery Disease:
Diagnostic Evaluation & Surgical Management
Medical Management

Coronary Artery Disease - Medical Management

Coronary Angioplasty and "Medical" Interventions
in Acute Myocardial Infarction

Surgical Management

Workshops

8 C.M.E. and 8 A.A.F.P. credits
to be awarded.

Lecture Series courtesy of
Bishop Clarkson Memorial Hospital
Medical/Dental Staff
44th and Dewey Avenue
Omaha, NE 68105-1018

For more information call 402-559-3378

The Nebraska Medical Journal

VOL. 72, NO. 4

APRIL 1987

EDITOR —

ALAN D. FORKER, M.D.
5505 Ellendale Road,
Lincoln, NE 68510

Associate Editors:

Deepak M. Gangahar, M.D., Lincoln
Charles S. Wilson, M.D., Lincoln

Editorial Board:

James O. Armitage, M.D., Omaha
Rodney S.W. Basler, M.D., Lincoln
Jehangir B. Bastani, M.D., Lincoln
John H. Casey, M.D., Lincoln
Paul E. Collicott, M.D., Lincoln
John F. Connolly, M.D., Omaha
Douglass Decker, Jr., M.D., Lincoln
Robert W. Gillespie, M.D., Lincoln
Stephen R. Grenier, M.D., Lincoln
Bruce D. Gutnik, M.D., Omaha
Roger Harned, M.D., Omaha
Edward A. Holyoke, Jr., M.D., Ogallala
Sushil S. Lacy, M.D., Lincoln
Hal K. Mardis, M.D., Omaha
Gilles R. G. Monif, M.D., Omaha
Walter J. O'Donohue, M.D., Omaha
William F. Rayburn, M.D., Omaha
John L. Reed, M.D., Lincoln
Jerald R. Schenken, M.D., Omaha
Kenton L. Shaffer, M.D., Kearney
Harlan C. Shriner, Jr., M.D., Lincoln
Patricia Cole Stivins, M.D., Lincoln
Harold W. Thaut, M.D., Beatrice
Jon S. Thompson, M.D., Omaha
William L. Vosik, M.D., Kearney
Arthur Weaver, M.D., Lincoln



SUBSCRIPTION RATE

\$18.00 Per Year U.S.
\$18.00 Per Year Foreign Country
Single Copies \$1.50 Each

Copyright © 1987 Nebraska Medical Association. Information concerning reprints of the articles in this Journal and concerning obtaining permission for the reproduction of any portion of this Journal may be obtained from the Editor.

The Nebraska Medical Journal does not assume responsibility for statements made or opinions expressed by the authors. Products and services advertised are neither endorsed nor warranted by the Nebraska Medical Association. The Nebraska Medical Journal reserves the right to accept or reject advertising copy.

Published monthly and Second-Class Postage paid at Lincoln, Nebraska and at additional mailing offices (ISSN 0091-6730)

Address all correspondence relating to subscriptions, advertising or address changes to William L. Schellpeper, Business Manager, 1512 First Tier Bank Building, Lincoln, Nebraska 68508. Phone (402) 474-4472.

EDITORIAL —

Cranial Magnetic Resonance Imaging and Multiple Sclerosis Lesions 101
John F. Aita, M.D.

ORIGINAL ARTICLES —

Perinatal Management and Outcome of Very Low Birthweight Infants 102
Leigh Hoppe, R.N., M.S.
Joan V. Eggert, M.P.H., M.D.
Kristen E. Hoffman, M.D.
Larry D. Eggert, M.D.

Characteristics of Persons Found Not Guilty by Reason of Insanity 109
Upma Dinghra, M.D.
Leonard E. Woytassek, M.D.
Klaus Hartmann, M.D.

Should Your Children Seek To Become Physicians?® 112
Leif C. Beck, J.D., C.P.B.C.

PERINATAL PAGE —

Ultrasound Assessment of Umbilical Artery and Vein Blood Flow 115
J. Patrick Lavery, M.D.

X-RAY OF THE MONTH —

Traumatic Rupture of the Thoracic Aorta 117
Mary T. Feeney, M.D.
James J. Phalen, M.D.

FEATURES —

President's Page 119
The Auxiliary 120
UNMC News 121
Letter to the Editor 121
Welcome New Members 122
In Memoriam 122
Coming Meetings 123
The Annual Session Program 127

Since 1925

**Nebraska's
Leading
Physicians and
Surgical
Supply House**

Phone 474-3222



**DONLEY MEDICAL
SUPPLY COMPANY**

P.O. Box 83108, Lincoln, NE 68501
AUTHORIZED CONTRACT AGENT

REPRINTS

OF YOUR

Technical Articles

Are a direct presentation of research
and a valuable supplement
to any doctor's library.



It costs very little
to run reprints —
write us for prices

Norfolk Printing Co., Inc.

118 North Fifth
NORFOLK, NEBRASKA 68701

Letterheads - Statements
Envelopes - Office Forms
Quality Printing at the Right Price

ADVICE TO AUTHORS

Manuscripts should be submitted in duplicate to the Editor at the following address: Alan D. Forker, M.D., 5505 Ellendale Road, Lincoln, Nebraska 68510. The manuscript should be typewritten, double-spaced, on 8½ x 11 in. paper, with generous margins on each page. Number all pages in the right upper corner with the author's surname.

Review articles will be considered, and should generally be limited to less than 4,000 words and approximately 30 references.

Manuscripts describing original clinical or laboratory research should be limited to 2,000 words and approximately 20 references.

Acknowledgements must be given when material from other publications is included. Provide names of authors, title of article, title of journal or book, volume number, pages, month and year, and publisher's permission to reprint.

Always send a covering letter or letter of transmittal with each manuscript, and refer to the manuscript by its title, in the letter and all correspondence. Do not send a manuscript that was published elsewhere.

Title page: each manuscript should have a title page, including the full name, academic degree, and hospital or university affiliation of each author. A name and address for reprint requests should be included on the title page, including street address, city, state, and zip code.

Summary for article: all major scientific articles should be accompanied by a summary at the end of the article, summarizing the key information and recommendations presented.

References: should be listed in the order in which they appear in the article and should be typed double-spaced. Authors are responsible for the completeness and accuracy of all cited references. Journal references should include authors' names and initials, title of article, abbreviated name of Journal (as listed in Index Medicus), volume number, inclusive pages, and year of publication. References to books should include authors, title, location and name of publisher, year of publication, edition, and page numbers.

Tables and illustrations: should be typed double-spaced on separate sheets of 8½ x 11 in. paper. Each Table should have a title. Illustrations should be prepared professionally and submitted as high-quality, glossy, unmounted black-and-white photographic prints, at least 5 x 7 in. Do not send original artwork. Each illustration should be consecutively numbered and cited in the text. Each photograph should have a gummed label on the back containing the figure number, name of senior author and an arrow indicating top of figure. Legends should be typed double-space for each illustration. Permission to reproduce a picture of a patient is needed, if such a picture is included.

Letters-to-the-Editor: letters are encouraged by all readers and will be published as space permits and at the discretion of the Editor. All letters should be accompanied by the notation: For publication. Galley proofs generally will not be returned to the authors pre-publication.

Manuscripts will be published in the order in which they are received, particularly in the order in which galley proofs are returned from the authors. The Editor of this Journal assumes no responsibility for opinions and claims expressed in an article published in this Journal.

Reprints should be ordered from the printer, Norfolk Printing Company, Inc., P.O. Box 278, Norfolk, Nebraska 68701.



**NEBRASKA
MEDICAL ASSOCIATION
119th Annual Session
April 24-28, 1987**

**CORNHUSKER HOTEL
Lincoln, Nebraska**

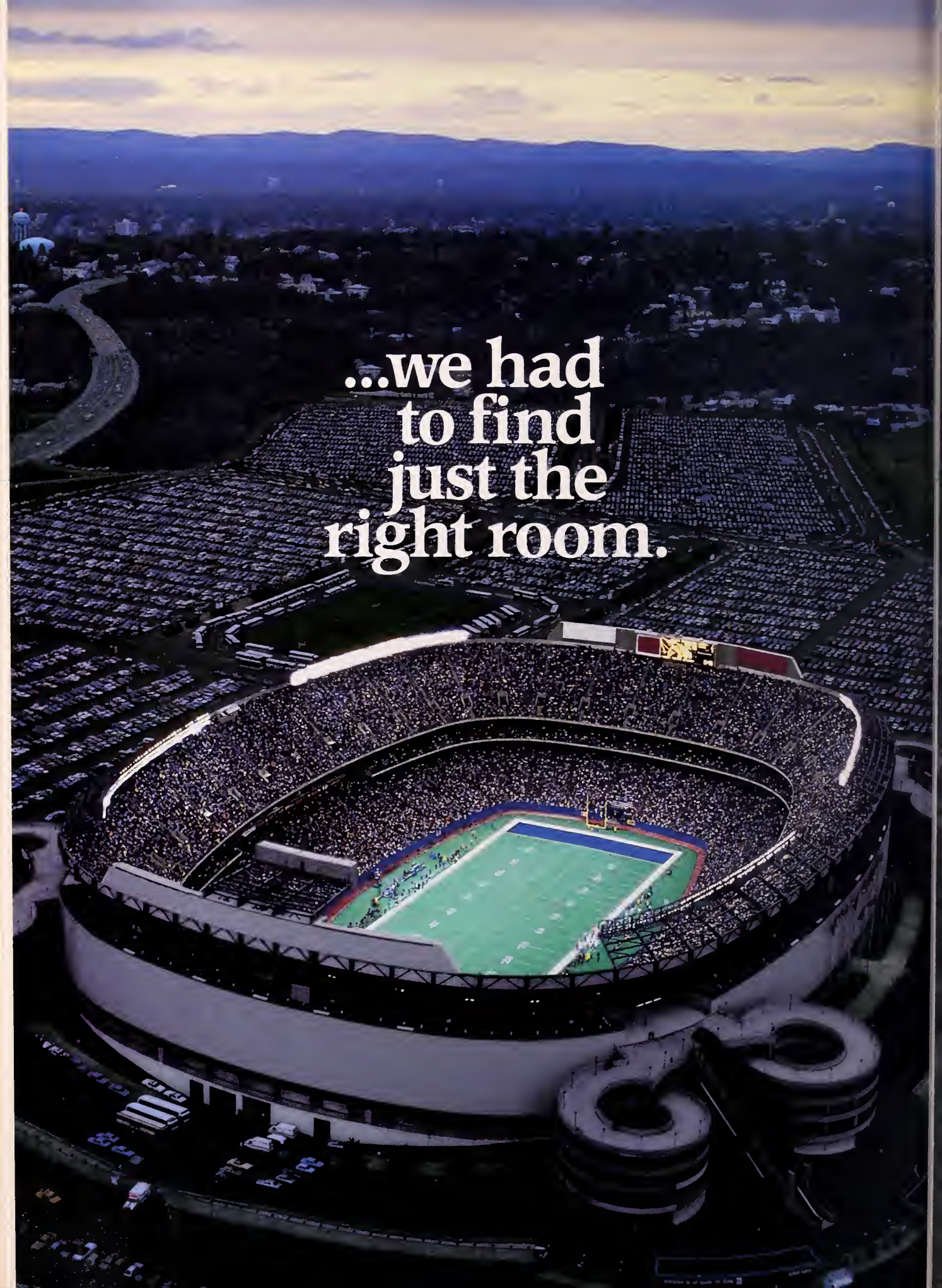
To show you how many
hypertensives stayed on

INDERAL[®] LA
(PROPRANOLOL HCl)

after a major nationwide trial...



...we had
to find
just the
right room.



60,073 patients (90%) who started on INDERAL® LA stayed on INDERAL LA.^{1*}

Surprising? Not really.

Because most patients on INDERAL LA (propranolol HCl) don't even know it's working.

A recent double-blind, placebo-controlled, crossover study in 138 hypertensive patients² revealed that INDERAL LA has a side effects profile unsurpassed by atenolol or metoprolol — which shows how well-tolerated once-daily INDERAL LA can be.

Sole therapy or concomitant therapy?

Fifty-nine percent of the time, INDERAL LA stood on its own.

The patients in the nationwide compliance trial were no different from yours. Generally when the antihypertensive regimen is complicated, compliance may become a problem. So, the effectiveness of INDERAL LA as once-daily monotherapy is a big plus. Of the remaining hypertensives in the program, 36% were controlled merely with the addition of a diuretic to INDERAL LA.

For the noncompliant patients in your practice, INDERAL LA may well be the answer.

Almost 20,000 of the patients in the nationwide compliance trial were identified as having been noncompliant with their previous antihypertensive therapy. Their physicians reported that 88% showed improved compliance when placed on once-daily INDERAL LA.

Control, comfort, and compliance

ONCE-DAILY
INDERAL® LA
(PROPRANOLOL HCl) LONG ACTING CAPSULES

Like conventional INDERAL Tablets, INDERAL LA should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree, and bronchial asthma.

*After a 30-day trial with INDERAL LA, physicians reported that 90% of the patients would remain on INDERAL LA.

The one you know best keeps looking better

Please see next page for brief summary of prescribing information.

The one you know best keeps looking better

BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR)

INDERAL® LA brand of propranolol hydrochloride (Long Acting Capsules)

DESCRIPTION. Inderal LA is formulated to provide a sustained release of propranolol hydrochloride. Inderal LA is available as 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. Inderal is a nonselective beta-adrenergic receptor blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by Inderal, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

Inderal LA Capsules (80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with Inderal LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of Inderal tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

Inderal LA should not be considered a simple mg for mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to Inderal LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, Inderal LA has been therapeutically equivalent to the same mg dose of conventional Inderal as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. Inderal LA can provide effective beta blockade for a 24-hour period.

The mechanism of the antihypertensive effect of Inderal has not been established. Among the factors that may be involved in contributing to the antihypertensive action are (1) decreased cardiac output, (2) inhibition of renin release by the kidneys, and (3) diminution of tonic sympathetic nerve outflow from vasomotor centers in the brain. Although total peripheral resistance may increase initially, it readjusts to or below the pretreatment level with chronic use. Effects on plasma volume appear to be minor and somewhat variable. Inderal has been shown to cause a small increase in serum potassium concentration when used in the treatment of hypertensive patients.

In angina pectoris, propranolol generally reduces the oxygen requirement of the heart at any given level of effort by blocking the catecholamine-induced increases in the heart rate, systolic blood pressure, and the velocity and extent of myocardial contraction. Propranolol may increase oxygen requirements by increasing left ventricular fiber length, end diastolic pressure and systolic ejection period. The net physiologic effect of beta-adrenergic blockade is usually advantageous and is manifested during exercise by delayed onset of pain and increased work capacity.

In dosages greater than required for beta blockade, Inderal also exerts a quinidine-like or anesthetic-like membrane action which affects the cardiac action potential. The significance of the membrane action in the treatment of arrhythmias is uncertain.

The mechanism of the antimigraine effect of propranolol has not been established. Beta-adrenergic receptors have been demonstrated in the pial vessels of the brain.

Beta receptor blockade can be useful in conditions in which, because of pathologic or functional changes, sympathetic activity is detrimental to the patient. But there are also situations in which sympathetic stimulation is vital. For example, in patients with severely damaged hearts, adequate ventricular function is maintained by virtue of sympathetic drive which should be preserved. In the presence of AV block, greater than first degree, beta blockade may prevent the necessary facilitating effect of sympathetic activity on conduction. Beta blockade results in bronchial constriction by interfering with adrenergic bronchodilator activity which should be preserved in patients subject to bronchospasm.

Propranolol is not significantly dialyzable.

INDICATIONS AND USAGE. Hypertension: Inderal LA is indicated in the management of hypertension, it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. Inderal LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: Inderal LA is indicated for the long-term management of patients with angina pectoris.

Migraine: Inderal LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: Inderal LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. Inderal LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. Inderal is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with Inderal.

WARNINGS. CARDIAC FAILURE. Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or Inderal should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of Inderal therapy. Therefore, when discontinuance of Inderal is planned the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If Inderal therapy is interrupted and exacerbation of angina occurs, it is usually advisable to reinstitute Inderal therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema) — PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. Inderal should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY. The necessity or desirability of withdrawal of beta-blocking therapy prior

to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

Inderal (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, e.g., dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA. Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia in labile insulin-dependent diabetes. In these patients, it may be more difficult to adjust the dosage of insulin.

THYROTOXICOSIS. Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case, this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. General: Propranolol should be used with caution in patients with impaired hepatic or renal function. Inderal (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that Inderal may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

Clinical Laboratory Tests. Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS. Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if Inderal is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Carcinogenesis, Mutagenesis, Impairment of Fertility. Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

Pregnancy. Pregnancy Category C. Inderal has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. Inderal should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. Inderal is excreted in human milk. Caution should be exercised when Inderal is administered to a nursing woman.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: bradycardia, congestive heart failure, intensification of AV block, hypotension, paresthesia of hands, thrombocytopenic purpura, arterial insufficiency, usually of the Raynaud type.

Central Nervous System: lightheadedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to cataplexy, visual disturbances, hallucinations, an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-immune. In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: alopecia, LE-like reactions, psoriasisiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (propranolol) have not been associated with propranolol.

DOSEAGE AND ADMINISTRATION. Inderal LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from Inderal tablets to Inderal LA capsules, care should be taken to assure that the desired therapeutic effect is maintained. Inderal LA should not be considered a simple mg for mg substitute for Inderal. Inderal LA has different kinetics and produces lower blood levels. Retitration may be necessary especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION — Dosage must be individualized. The usual initial dosage is 80 mg Inderal LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood-pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS — Dosage must be individualized. Starting with 80 mg Inderal LA once daily, dosage should be gradually increased at three to seven day intervals until optimum response is obtained. Although individual patients may respond at any dosage level, the average optimum dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE — Dosage must be individualized. The initial oral dose is 80 mg Inderal LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimum migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximum dose, Inderal LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS — 80-160 mg Inderal LA once daily.

PEDIATRIC DOSAGE — At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

REFERENCES:

1. Inderal LA National Compliance Evaluation Program. Data on file, Ayerst Laboratories.
2. Ravid M, Lang R, Jutrin I. The relative antihypertensive potency of propranolol, oxprenolol, atenolol, and metoprolol given once daily. *Arch Intern Med* 1985; 145: 1321-1323.

Ayerst

AYERST LABORATORIES
New York, NY 10017

© 1986 Ayerst Laboratories

AIM HIGH

A SPECIAL PRACTICE FOR SPECIALISTS.



If you're a **Surgeon or OB/GYN or Other Medical Specialist**, the Air Force may have a special practice for you. What makes it special? You'll enjoy an excellent pay and benefits package. There'll be more time to spend with your family. You'll receive 30 days of vacation with pay each year. And you will work with modern equipment and some of the most highly trained professionals in the world, serving your country and your patients. Now that's special! Find out just how special your practice can be. Call

TSgt James H. Sisley

(402) 556-0715



AMA News Notes

AMA's leadership has identified six top priorities for the Washington Office and federation effort: physician reimbursement (including physician DRGs, medicare fee controls and mandated assignment), tobacco issues, campaign finance reform, professional liability, support for bio-medical research, and unrelated business income tax.

For physician reimbursement, the AMA is marshalling an unprecedented effort to defeat the Administration's MD/DRG proposal. For the first time, the AMA has hired an outside lobby firm to augment AMA, state and specialty efforts. AMA is working not only with the affected specialties — radiologists, anesthesiologists, and pathologists — but with ALL of the specialty societies. Through House of Delegates action, FEDNET, TALKING POINTS and AM NEWS, the nation's phy-

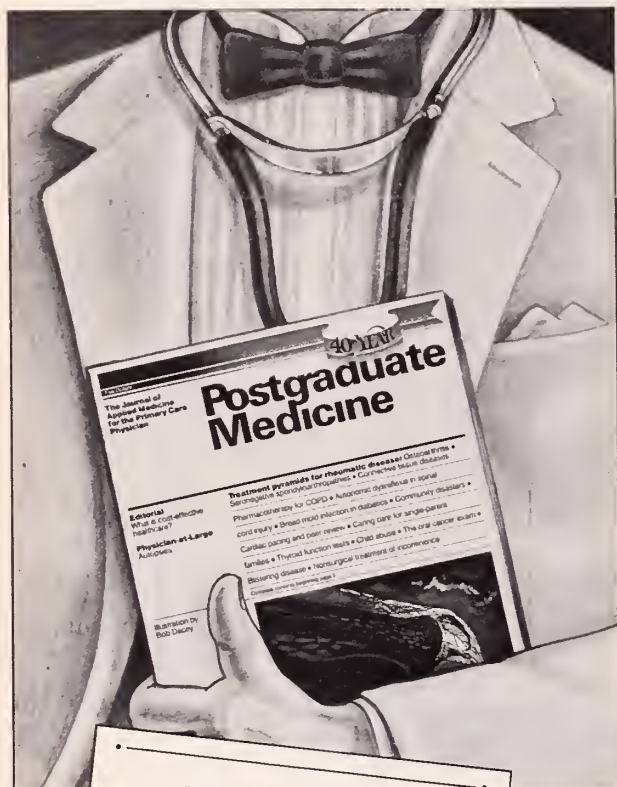
sicians have now been fully alerted to the MD/DRG issue.

AMA will be writing its entire membership shortly to seek additional help in the physician DRG issue. The AMA now has 120 SPONSORS of House and Senate Resolutions on this issue. The work of the Federation has made a profound impact already, and the Chicago-based AMA staff will work with any society in any further activity possible.

For tobacco, Representative Synar has reintroduced the AMA advertising ban bill. The Washington Office — along with the state societies and grassroots network — will be seeking additional Members of Congress to sign on as co-sponsors. The Board of Trustees has approved a revised draft bill for profes-

(continued on page 12-A)

FAMOUS PHYSICIANS ARE SHOWING UP FOR OUR 40th YEAR CELEBRATION.



Faith T. Fitzgerald, M.D.
Richard L. Byyny, M.D.
Frederick C. Goetz, M.D.
Frank A. Finnerty Jr., M.D.
J. Willis Hurst, M.D.
Paul P. Griffin, M.D.

Read Every Issue From Cover to Cover:

April

Symposium: Focus on General Internal Medicine Faith T. Fitzgerald, M.D.
coordinator

Special Article: General Internal Medicine 1947-1987 Richard L. Byyny, M.D.

May 1

Symposium: Diabetes Mellitus

Special Article: Diabetes Mellitus 1947-1987 Frederick C. Goetz, M.D.

May 15

Symposium: Hypertension Frank A. Finnerty, Jr.
coordinator

Special Article: Cardiology 1947-1987 J. Willis Hurst, M.D.

June

Symposium: Orthopedics in Primary Care

Special Article: Orthopedics 1947-1987 Paul P. Griffin, M.D.

AMA News Notes

(continued from page 11-A)

sional liability reforms. The AMA hopes to see this legislation reintroduced shortly.

The AMA will be working on other issues as well. Catastrophic health insurance, professional self-regulation, AIDS, PRO issues, and Medicare reform are just a few of the other issues in the 100th Congress.

The AMA is also actively promoting a comprehensive reform of Medicare that, when enacted, will take the federal government out of the micro-management of medical practice. These reforms are designed to eliminate the yearly set of drastic cuts we see as Congress attempts to control its deficit by cutting back on health programs. The program calls for individual responsibility and choice with real pre-funding to assure future benefits. It targets scarce federal dollars at those who are in need instead of subsidizing the medical care of the affluent.

In the last Congress, the AMA made significant progress in such areas as repeal of health planning, defeat of a health professions draft registration and passage of a vaccine compensation program. While the AMA was able also to end the Medicare fee freeze, Congress put caps on physicians' charges. Thus, even with some success, new challenges remain.

The AMA is also working with a coalition of organizations — AARP, hospital groups and the American Nurses Association, plus 160 others — calling on Congress to take a more balanced view of the budget and avoid the past practice of taking a disproportionate share of budget cuts from health programs.

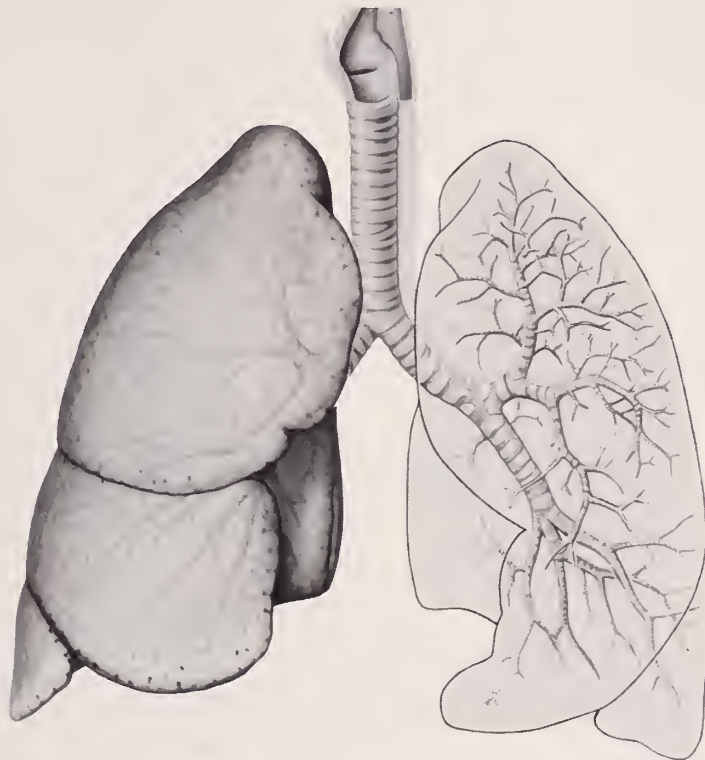
To meet these challenges, the AMA has a strong commitment to working with the state, county, and specialty societies to improve grassroots physician response. A significant number of societies are now involved with the major issues this year. Several have written their entire membership on the physician DRG issue. Among those who have already made Congressional visits this year are Alabama, American Society of Anesthesiologists, Ameri-

(continued on page 18-A)

40th YEAR
**Postgraduate
Medicine**

Every Issue is a Celebration of Clinical Information

Consider the causative organisms...



Cecior[®]
cefacior

250-mg Pulvules[®] t.i.d.

**offers effectiveness against
the major causes of bacterial bronchitis**

H. influenzae*, *H. influenzae*, *S. pneumoniae*, *S. pyogenes
(ampicillin-susceptible) (ampicillin-resistant)

Brief Summary. Consult the package literature for prescribing information.

Indications and Usage. Cecior[®] (cefacior, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae* (*Diplococcus pneumoniae*), *Haemophilus influenzae*, and *S. pyogenes* (group A beta hemolytic streptococci).

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Cecior.

Contraindication. Cecior is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY. THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES.

Antibiotics, including Cecior, should be administered cautiously to any patient who has demonstrated some form of allergy particularly to drugs.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics including macrolides, semisynthetic penicillins, and cephalosporins; therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening.

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis.

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, manage-

ment should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile*. Other causes of colitis should be ruled out.

Precautions, General Precautions—If an allergic reaction to Cecior[®] (cefacior, Lilly) occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of Cecior may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy appropriate measures should be taken.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Cecior should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended. As a result of administration of Cecior, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinistest[®] tablets but not with Tes-Tape[®] (Glucose Enzymatic Test Strip, USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy—Pregnancy Category B—Reproduction studies have been performed in mice and rats at doses up to 12 times the human dose and in ferrets given three times the maximum

human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Cecior[®] (cefacior, Lilly). There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers—Small amounts of Cecior have been detected in mother's milk following administration of single 500-mg doses. Average levels were 0.16, 0.20, 0.21, and 0.16 mcg/ml at two, three, four, and five hours respectively. Trace amounts were detected at one hour. The effect on nursing infants is not known. Caution should be exercised when Cecior is administered to a nursing woman.

Usage in Children—Safety and effectiveness of this product for use in infants less than one month of age have not been established.

Adverse Reactions—Adverse effects considered related to therapy with Cecior are uncommon and are listed below.

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70).

Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely.

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100), pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Cecior. Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported.

Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have

occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic—Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic—Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

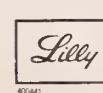
Renal—Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200).

[061782R]

Note: Cecior[®] (cefacior, Lilly) is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

© 1984, ELI LILLY AND COMPANY



Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285.

Eli Lilly Industries, Inc., Carolina, Puerto Rico 00630.

40547

HELP US HONOR KEN NEFF

Plan to attend the Sportsman's Day/Fun Night Banquet, Monday, April 27, 7:30 p.m., in the Ballroom of the Cornhusker Hotel, Lincoln.

Help us recognize the dedicated service Kenneth Neff gave our Nebraska Medical Association. Ken and his wife, Ida, will be our guests of honor at the banquet.

The Johnny Ray Gomez Show and "Stars of Tomorrow" will present an evening of musical entertainment.



Kenneth Neff

ATTENTION NON-PARTICIPATING PHYSICIANS!

Concerned about all of those
"MAXIMUM ALLOWABLE ACTUAL CHARGES?"

AUTO-MED INC. presents software for your IBM-PC or Compatible that will calculate the "M.A.A.C." for you.

MAAC can generate the REQUIRED LETTER
you must send to certain patients about your charges.

**BEST OF ALL THE SUPPLIED FLOPPY DISK &
INSTRUCTIONS ARE ONLY \$49.95**

ORDER NOW! Send Check for \$49.95 plus \$2.95 shipping

Name: _____

Address: _____

City: _____ **AUTO-MED INC.**

State: _____ Zip: _____

1922 South 149th Circle
Omaha, Nebraska 68144



"Living in the city
is lonely enough...
with herpes it's like
solitary confinement."

ZOVIRAX[®]
(acyclovir)
CAPSULES

**Prevent genital herpes
recurrences
month after month with
daily therapy.**

(In controlled studies, recurrences were
totally prevented for 4 to 6 months in up to
75% of patients.)

*Please see last page of this advertisement for
brief summary of prescribing information.*

ZOVIRAX[®] (acyclovir) CAPSULES

**Help free your
patients from
recurrences.**

Daily therapy

Coping with genital herpes is rarely easy. For some, the worst part is the pain and discomfort of frequent attacks — month after month, year after year. For others, the emotional burden presents a more difficult problem, leading to social isolation, anxiety, and diminished self-esteem.

Prevent or reduce recurrences

Although your patients have to live with herpes, they shouldn't have to suffer. Daily therapy with ZOVIRAX CAPSULES can help free them from the cycle of recurrent genital herpes. For many, one capsule three times a day can suppress recurrences completely while on therapy.

Generally well tolerated

Daily therapy with ZOVIRAX CAPSULES is generally well tolerated. The most frequent adverse reactions reported during clinical trials were headache, diarrhea, nausea/vomiting, vertigo, and arthralgia.

The physical and emotional difficulties posed by genital herpes are unique for each patient. The frequency and severity of recurrent episodes, as well as the emotional impact of the disease, should be considered when selecting daily therapy with ZOVIRAX CAPSULES.

*Please see brief summary of
prescribing information on next page*



Prevent recurrences month after month*

ZOVIRAX[®]

(acyclovir) CAPSULES

Brief Summary

INDICATIONS AND USAGE: Zovirax Capsules are indicated for the treatment of initial episodes and the management of recurrent episodes of genital herpes in certain patients.

The severity of disease is variable depending upon the immune status of the patient, the frequency and duration of episodes, and the degree of cutaneous or systemic involvement. These factors should determine patient management, which may include symptomatic support and counseling only, or the institution of specific therapy. The physical, emotional and psychosocial difficulties posed by herpes infections as well as the degree of debilitation, particularly in immunocompromised patients, are unique for each patient, and the physician should determine therapeutic alternatives based on his or her understanding of the individual patient's needs. Thus Zovirax Capsules are not appropriate in treating all genital herpes infections. The following guidelines may be useful in weighing the benefit/risk considerations in specific disease categories:

First Episodes (primary and nonprimary infections — commonly known as initial genital herpes):

Double-blind, placebo-controlled studies have demonstrated that orally administered Zovirax significantly reduced the duration of acute infection (detection of virus in lesions by tissue culture) and lesion healing. The duration of pain and new lesion formation was decreased in some patient groups. The promptness of initiation of therapy and/or the patient's prior exposure to Herpes simplex virus may influence the degree of benefit from therapy. Patients with mild disease may derive less benefit than those with more severe episodes. In patients with extremely severe episodes, in which prostration, central nervous system involvement, urinary retention or inability to take oral medication require hospitalization and more aggressive management, therapy may be best initiated with intravenous Zovirax.

Recurrent Episodes:

Double-blind, placebo-controlled studies in patients with frequent recurrences (6 or more episodes per year) have shown that Zovirax Capsules given for 4 to 6 months prevented or reduced the frequency and/or severity of recurrences in greater than 95% of patients. Clinical recurrences were prevented in 40 to 75% of patients. Some patients experienced increased severity of the first episode following cessation of therapy; the severity of subsequent episodes and the effect on the natural history of the disease are still under study.

The safety and efficacy of orally administered acyclovir in the suppression of frequent episodes of genital herpes have been established only for up to 6 months. Chronic suppressive therapy is most appropriate when, in the judgement of the physician, the benefits of such a regimen outweigh known or potential adverse effects. In general, Zovirax Capsules should not be used for the suppression of recurrent disease in mildly affected patients. Unanswered questions concerning the human relevance of *in vitro* mutagenicity studies and reproductive toxicity studies in animals given very high doses of acyclovir for short periods (see Carcinogenesis, Mutagenesis, Impairment of Fertility) should be borne in mind when designing long-term management for individual patients. Discussion of these issues with patients will provide them the opportunity to weigh the potential for toxicity against the severity of their disease. Thus, this regimen should be considered only for appropriate patients and only for six months until the results of ongoing studies allow a more precise evaluation of the benefit/risk assessment of prolonged therapy.

Limited studies have shown that there are certain patients for whom intermittent short-term treatment of recurrent episodes is effective. This

approach may be more appropriate than a suppressive regimen in patients with infrequent recurrences.

Immunocompromised patients with recurrent herpes infections can be treated with either intermittent or chronic suppressive therapy. Clinically significant resistance, although rare, is more likely to be seen with prolonged or repeated therapy in severely immunocompromised patients with active lesions.

CONTRAINDICATIONS: Zovirax Capsules are contraindicated for patients who develop hypersensitivity or intolerance to the components of the formulation.

WARNINGS: Zovirax Capsules are intended for oral ingestion only.

PRECAUTIONS: General: Zovirax has caused decreased spermatogenesis at high doses in some animals and mutagenesis in some acute studies at high concentrations of drug (see PRECAUTIONS — Carcinogenesis, Mutagenesis, Impairment of Fertility). The recommended dosage and length of treatment should not be exceeded (see DOSAGE AND ADMINISTRATION).

Exposure of Herpes simplex isolates to acyclovir *in vitro* can lead to the emergence of less sensitive viruses. The possibility of the appearance of less sensitive viruses in man must be borne in mind when treating patients. The relationship between the *in vitro* sensitivity of Herpes simplex virus to acyclovir and clinical response to therapy has yet to be established.

Because of the possibility that less sensitive virus may be selected in patients who are receiving acyclovir, all patients should be advised to take particular care to avoid potential transmission of virus if active lesions are present while they are on therapy. In severely immunocompromised patients, the physician should be aware that prolonged or repeated courses of acyclovir may result in selection of resistant viruses which may not fully respond to continued acyclovir therapy.

Drug Interactions: Co-administration of probenecid with intravenous acyclovir has been shown to increase the mean half-life and the area under the concentration-time curve. Urinary excretion and renal clearance were correspondingly reduced.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Acyclovir was tested in lifetime bioassays in rats and mice at single daily doses of 50, 150 and 450 mg/kg given by gavage. There was no statistically significant difference in the incidence of tumors between treated and control animals, nor did acyclovir shorten the latency of tumors. In 2 *in vitro* cell transformation assays, used to provide preliminary assessment of potential oncogenicity in advance of these more definitive life-time bioassays in rodents, conflicting results were obtained. Acyclovir was positive at the highest dose used in one system and the resulting morphologically transformed cells formed tumors when inoculated into immunosuppressed, syngeneic, weanling mice. Acyclovir was negative in another transformation system considered less sensitive.

In acute studies, there was an increase, not statistically significant, in the incidence of chromosomal damage at maximum tolerated parental doses of 100 mg/kg acyclovir in rats but not Chinese hamsters; higher doses of 500 and 1000 mg/kg were clastogenic in Chinese hamsters. In addition, no activity was found after 5 days dosing in a dominant lethal study in mice. In 6 of 11 microbial and mammalian cell assays, no evidence of mutagenicity was observed. At 3 loci in a Chinese hamster ovary cell line, the results were inconclusive. In 2 mammalian cell assays (human lymphocytes and L5178Y mouse lymphoma cells *in vitro*), positive responses for mutagenicity and chromosomal damage occurred, but only at concentrations at least 400 times the acyclovir plasma levels achieved in man.

Acyclovir has not been shown to impair fertility or reproduction in mice (450 mg/kg/day, p.o.) or in rats (25 mg/kg/day, s.c.). At 50 mg/kg/day s.c. in the rat, there was a statistically significant increase in post-implantation loss, but no concomitant decrease in litter size. In female rabbits treated subcutaneously with acyclovir subsequent to mating, there was a statistically significant decrease in implantation efficiency but no concomitant decrease in litter size at a dose of 50 mg/kg/day. No effect upon implantation efficiency was observed when the same dose was administered intravenously. In a rat peri- and postnatal study at 50 mg/kg/day s.c., there was a statistically significant decrease in the group mean numbers of corpora lutea, total implantation sites and live fetuses in the F₁ generation. Although not statistically signifi-

cant, there was also a dose-related decrease in group mean numbers of live fetuses and implantation sites at 12.5 mg/kg/day and 25 mg/kg/day, s.c. The intravenous administration of 100 mg/kg/day, a dose known to cause obstructive nephropathy in rabbits, caused a significant increase in fetal resorptions and a corresponding decrease in litter size. However, at a maximum tolerated intravenous dose of 50 mg/kg/day in rabbits, there were no drug-related reproductive effects.

Intraperitoneal doses of 320 or 80 mg/kg/day acyclovir given to rats for 1 and 6 months, respectively, caused testicular atrophy. Testicular atrophy was persistent through the 4-week post-dose recovery phase after 320 mg/kg/day; some evidence of recovery of sperm production was evident 30 days postdose. Intravenous doses of 100 and 200 mg/kg/day acyclovir given to dogs for 31 days caused aspermatogenesis. Testicles were normal in dogs given 50 mg/kg/day, i.v. for one month.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Acyclovir was not teratogenic in the mouse (450 mg/kg/day, p.o.), rat (50 mg/kg/day, s.c.) or rabbit (50 mg/kg/day, s.c. and i.v.). There are no adequate and well-controlled studies in pregnant women. Acyclovir should not be used during pregnancy unless the potential benefit justifies the potential risk to the fetus. Although acyclovir was not teratogenic in animal studies, the drug's potential for causing chromosome breaks at high concentration should be taken into consideration in making this determination.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Zovirax is administered to a nursing woman. In nursing mothers, consideration should be given to not using acyclovir treatment or discontinuing breastfeeding.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS — Short-Term

Administration: The most frequent adverse reactions reported during clinical trials were nausea and/or vomiting in 8 of 298 patient treatments (2.7%) and headache in 2 of 298 (0.6%). Less frequent adverse reactions, each of which occurred in 1 of 298 patient treatments (0.3%), included diarrhea, dizziness, anorexia, fatigue, edema, skin rash, leg pain, inguinal adenopathy, medication taste and sore throat.

Long-Term Administration: The most frequent adverse reactions reported in studies of daily therapy for 3 to 6 months were headache in 33 of 251 patients (13.1%), diarrhea in 22 of 251 (8.8%), nausea and/or vomiting in 20 of 251 (8.0%), vertigo in 9 of 251 (3.6%), and arthralgia in 9 of 251 (3.6%). Less frequent adverse reactions, each of which occurred in less than 3% of the 251 patients (see number of patients in parentheses), included skin rash (7), insomnia (4), fatigue (7), fever (4), palpitations (1), sore throat (2), superficial thrombophlebitis (1), muscle cramps (2), pars planitis (1), menstrual abnormality (4), acne (3), lymphadenopathy (2), irritability (1), accelerated hair loss (1), and depression (1).

DOSAGE AND ADMINISTRATION: Treatment of initial genital herpes: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 10 days (total 50 capsules).

Chronic suppressive therapy for recurrent disease: One 200 mg capsule 3 times daily for up to 6 months. Some patients may require more drug, up to one 200 mg capsule 5 times daily for up to 6 months.

Intermittent Therapy: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 5 days (total 25 capsules). Therapy should be initiated at the earliest sign or symptom (prodrome) of recurrence.

Patients With Acute or Chronic Renal Impairment: One 200 mg capsule every 12 hours is recommended for patients with creatinine clearance ≤ 10 ml/min/1.73 m².

HOW SUPPLIED: Zovirax Capsules (blue, opaque) containing 200 mg acyclovir and printed with "Wellcome ZOVIRAX 200". Bottles of 100 (NDC-0081-0991-55) and unit dose pack of 100 (NDC-0081-0991-56).

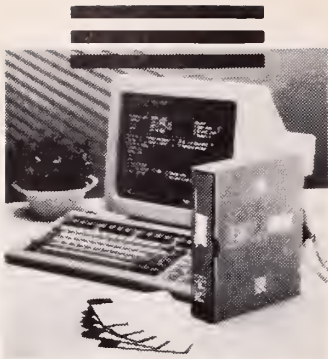
Store at 15°-30°C (59°-86°F) and protect from light.

*In controlled studies, recurrences were totally prevented for 4 to 6 months in up to 75% of patients.



Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

Copr. © 1986 Burroughs Wellcome Co. All rights reserved. 86-ZOV-5



Physicians who have thoroughly investigated their choices are selecting MDX* medical data software.

MDX

*MDX is a trademark of Calyx, Inc.

Call us about the multi-user, multi-tasking MDX system. We will send you a video tape presentation.



INFO-BUILDERS, INC.

402/331-2546
11203 JOHN GALT BOULEVARD
OMAHA, NEBRASKA 68137

Providing complete installation, training and support services

NEBRASKA MEDICAL ASSOCIATION

119th Annual Session

April 24-28, 1987

**CORNHUSKER HOTEL
Lincoln, Nebraska**

AMA News Notes

(continued from page 12-A)

can College of Emergency Physicians, Florida, Georgia, New York, College of American Pathologists, Texas and Washington. Soon to come will be Alaska, California, Cleveland Academy of Medicine, Idaho, Oklahoma, North Carolina, South Carolina, and others.

While the Congressional climate appears to be discouraging, with your assistance, the AMA can achieve positive results. Mechanisms are in place to make AMA views known and to have these views accepted. The AMA will continue to address each new challenge that faces medicine in the Congress so that physicians will be able to continue to provide quality care to their patients.

* * *

At its first meeting of 1987, the AMA Board of Trustees was briefed on the AMA Technical Report on Physician Manpower for 1987. The report is the first of a series of annual reports on physician manpower trends to be prepared by the AMA's Center for Health Policy Research in response to the directives of the AMA's House of Delegates. Highlights of the report include:

- The physician-to-population ratio began an upward trend in the 1960s, which accelerated in the 1970s.

- Undergraduate medical education has become more costly in recent years, and new physicians bear a heavier educational debt burden than recent graduates in other professions. Despite these changes, educational indebtedness for medical students is rising at rates comparable to other professional students.

- If the medical education system and physician retirement rates remain as they were in 1985, the active physician population will grow from 511,090 in 1985 to 683,000 by the year 2000, much faster than the U.S. population.

* * *

To enhance the understanding of alcoholism, *Alcoholism & Addiction Magazine* will make a free subscription available to every physician in the United States.

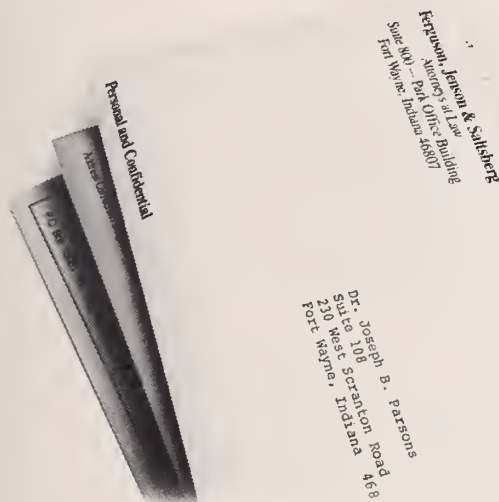
Crisis in black and white.

Your personal crisis may be waiting in the morning mail. If so, you'll want the best professional help. You'll want a Medical Protective General Agent.

Professional liability coverage is our only business. And we've been providing it for almost 100 years. Our agents live in the territories they serve so they understand the local legal climate. And with the extensive resources of the home office Law Department to draw from, they're always ready to answer your questions or give advice.

Someday it may be you against a negligence charge. When that day comes and your professional reputation is on the line, you're going to want all the help you can get. To make sure you have it, contact your Medical Protective General Agent today.

**THE
MEDICAL PROTECTIVE COMPANY**
FORT WAYNE, INDIANA



L. Roger Garner
Suite 114, Corporate Plaza, 11212 Davenport, Omaha, NE 68154, (402) 334-9689

AMA News Notes

Although many physicians are fully aware of the prevalence of alcohol and drug abuse among the millions of patients and families they serve, a large number of them still must deal with life-threatening situations with little knowledge concerning the complications introduced by chemical addiction, said John E. Kusik, Jr., president of the magazine.

"The official acceptance of chemical addiction as a disease," he said, "and the broad advances made during the last decade in research and treatment have greatly increased physician interest and concern."

The AMA has stated in the past that it is important for professionals and laymen alike to recognize that alcoholism is, in and of itself, a disabling and handicapping condition.

The magazine will honor a free subscription request made on the letterhead of a licensed physician anywhere in the 50 states and sent to *Alcoholism & Addiction Magazine*, 23860 Miles Road, Cleveland, Ohio 44128. The request must be made before April 30, 1987.

* * *

TENTH ANNUAL BLACK HILLS SEMINAR ON ADVANCES IN CLINICAL PEDIATRICS

The Tenth Annual Black Hills Seminar on Advances in Clinical Pediatrics — June 17, 18 and 19, 1987, at Sylvan Lake Resort, Custer, South Dakota, sponsored by the Department of Pediatrics and Adolescent Medicine, University of South Dakota School of Medicine. Guest faculty include: Drs. John Grossman, Alvin Jacobs, Daniel Levin, George McCracken and Paul Quie. For complete conference information, contact:

Lawrence R. Wellman, M.D.
CME Program Coordinator
USD School of Medicine
1100 S. Euclid, P.O. Box 5039
Sioux Falls, SD 57117-5039
605-333-7178

ORGANIZATIONS, STATE

American Cancer Society, Nebraska Division, Inc.
Don W. McClure, Exec. Vice President
8502 West Center Rd., P.O. Box 241255, Omaha 68124-5255

American Diabetes Association — Nebraska Affiliate, Inc.
Ron Van Ryswyk, Executive Director
7377 Pacific St., Ste. 216A, Omaha 68114

American Heart Association, Nebraska Affiliate
Dennis N. Nissen, Executive Director
3624 Farnam St., Omaha 68131

American Lung Association of Nebraska
8901 Indian Hills Dr., Ste. 107, Omaha 68114

American Red Cross
P.O. Box 83267
1701 "E" St., Lincoln 68501

Arthritis Foundation, Nebraska Chapter, Inc.
Mrs. Ellen Wright, Exec. Director
2229 N. 91st Court, Omaha 68134

Blue Cross and Blue Shield of Nebraska
Wm. H. Heavey, President
P.O. Box 3248, Main Station, Omaha 68180

Creighton University School of Medicine
Richard O'Brien, M.D., Dean
California at 24th St., Omaha 68178

Cystic Fibrosis Foundation, Nebraska Chapter
Charles R. Bercaw, Exec. Director
5017 Leavenworth St., Omaha 68106

Dairy Council of Central States, Inc.
Suite 103, Hillcrest Bldg.
76th & Main, Ralston 68127

Division of Rehabilitation Services
Nebraska Department of Education
6th Floor, 301 Centennial Mall South, Lincoln 68509

Division of Rehabilitation Services for the Visually Impaired
James. S. Nyman, Ph.D., Director
4600 Valley Road, Lincoln 68510

Easter Seal Society of Nebraska
Mrs. Letitia K. Simmons, Executive Director
3015 North 90th St., #6, Omaha 68134

Health Manpower Referral Service, State of Nebraska
3rd Floor, State Office, 301 Centennial Mall South, Lincoln 68509

Lincoln Council on Alcoholism and Drugs, Inc.
Room 212, 215 Centennial Mall, Lincoln 68508

March of Dimes — Birth Defects Foundation
1618 L Street, Lincoln 68508

MID-PLAINS POISON CONTROL CENTER
Childrens Memorial Hospital, 8301 Dodge St., Omaha 68114
(402) 390-5400 or 800-642-9999 (toll free Nebraska)

Missouri Valley Dermatologic Society
Richard Q. Crotty, M.D., Secretary
7822 Davenport St., Omaha 68114

Muscular Dystrophy Association
1912 No. 90th St., Lower Level, Omaha 68114

National Kidney Foundation of Nebraska
Karen Engelsman, Executive Director
2217 No. 91st Plaza, Omaha 68134
(402) 397-9234 — NE toll free 800-642-1255

National Multiple Sclerosis Society — Nebraska-Iowa Midlands Chapter
3624 Leavenworth, Omaha 68105

National Society to Prevent Blindness, Nebraska Affiliate
120 North 69th St., Suite 203, Omaha 68132-2720

Nebraska Academy of Ophthalmology
Mylan VanNewkirk, M.D., President
329 West 40th, Scott-bluff 69361

Nebraska Academy of Otolaryngology
Michael Crawford, M.D., President
201 Ridge St., #311, Council Bluffs, IA 51501

Nebraska Allergy Society
Linda B. Ford, M.D., President
401 E. Gold Coast Rd., Papillion 68128

Nebraska Association of Medical Assistants, Inc.
Marie Madison, President
405 East Stolley Park Rd., Grand Island 68801

Nebraska Association of Nuclear Physicians, Inc.
Merton A. Quaife, M.D., President
Dept. of Radiology, UNMC - 42nd & Dewey Ave., Omaha 68105

Nebraska Association of Pathologists
Joseph Rapoport, M.D., President
6901 No. 72nd St., Omaha 68122

Nebraska Chapter — American Academy of Family Physicians
David H. Filipi, M.D., Secretary-Treasurer
Mrs. Phyllis G. Hansen, Executive Secretary
River City Office Park, #202, 401 N 117th, Omaha 68154

Nebraska Chapter — American Academy of Physician Assistants
John Ries, PA-C, President
1101 N 50th, Omaha 68132

Nebraska Chapter — American Academy of Pediatrics
H. J. Kuehn, M.D., Chairman
8300 Dodge St., #219, Omaha 68114

Nebraska Chapter — American College of Emergency Physicians
Richard L. Keller, M.D., President
9641 No. 29th, Omaha 68112

Nebraska Chapter — American College of Physicians
Frederick F. Paustian, M.D., F.A.C.P., Governor
UNMC - 42nd & Dewey Ave., Omaha 68105

Nebraska Chapter — American College of Surgeons
Louis J. Gogela, M.D., Past President
2221 South 17th St., Lincoln 68502

Nebraska Chapter of Myasthenia Gravis Foundation
John F. Aita, M.D. Medical Advisor
105 So. 49th St., Omaha 68132

Nebraska Dental Association
Barry Ross, Executive Director
134 So. 13th St., Suite 1007, Lincoln 68508

Nebraska Dietetic Association
Linda O. Young, M.S., R.D., President
University of NE - 214 Ruth, Leverton Hall, Lincoln 68503

Nebraska Health Care Association
Sandra H. Hockley, Executive Director
3100 "O" St., Ste. 7, Lincoln 68510

Nebraska Hospital Association
Harlan Heald, President
Box 94833, 1335 "L" St., Lincoln 68509

Nebraska League for Nursing
Priscilla Allen, R.N., President
Box 126, Daykin 68338

Nebraska Medical Association
William L. Schellpeper, Executive Director
1512 First Tier Bank Bldg., Lincoln 68508

Nebraska Medical Foundation
William L. Schellpeper, Secretary
1512 First Tier Bank Bldg., Lincoln 68508

Nebraska Nurses Association
Mary Ann Sak, Executive Director
Suite 711, Terminal Bldg., Lincoln 68508

Nebraska Orthopaedic Society
Ronald Schwab, M.D., Secretary
2300 South 13th St., Lincoln 68502

Nebraska Perinatal Organization
Joy Jacobs, R.N., Secretary-Treasurer
St. Elizabeth Community Health Center - Labor & Del. Dpt.,
566 So. 70th St., Lincoln 68510

Nebraska Pharmacists Association
Tom R. Dolan, R.P., Executive Director
600 So. 12th, Lincoln 68508

Nebraska Psychiatric Society, District Branch of the American Psychiatric Association
John Y. Donaldson, M.D., President
6901 No. 72nd St., Omaha 68122

Nebraska Public Health Association
President, N.P.H.A.
P.O. Box 94813, Lincoln 68509

Nebraska Radiological Society
Joseph C. Anderson, M.D., President
Dept. of Radiology, UNMC - 42nd & Dewey, Omaha 68105

Nebraska Rheumatism Association
Arthur L. Weaver, M.D., President
2121 South 56th St., Lincoln 68506

Nebraska Section, American College of Obstetricians & Gynecologists
Larry E. Roffman, M.D.9
800 Doctors Bldg., Omaha 68131

Nebraska Society of Anesthesiologists
K. Reed Peters, M.D., President
1512 First Tier Bank Bldg., Lincoln 68508

Nebraska Society of Internal Medicine
Vernon Garwood, M.D., President
120 Wedgewood Drive, Suite A, Lincoln 68510

Nebraska Society for Respiratory Therapy
Lynn Lamprecht, RRT, President
Mem. Hospital of Dodge Co., 450 E. 23rd St.

Nebraska State Department of Health
Gregg Wright, M.D., Director of Health
P.O. Box 95007, 301 Centennial Mall South, Lincoln 68509

Nebraska State Obstetric and Gynecology Society
Dennis D. Beavers, M.D., Secretary-Treasurer
720 No. 87th St., Omaha 68114

Nebraska Stroke Foundation
Karyl Newman, President
P.O. Box 67004, Lincoln 68506

Nebraska Urological Association
Charles F. Damico, M.D., F.A.C.S., President
2115 No. Kansas, Hastings 68901

Nebraska Veterinary Medical Association
Don Ellerbee, Executive Director
209 West 9th St., Hastings 68901

Omaha Mid-West Clinical Society
Ms. Lorraine E. Seibel, Executive Secretary
7363 Pacific St., #205-B, Omaha 68114

United Cerebral Palsy of Lancaster County, Inc.
Jane Hoffart, Client Services Rep.
P.O. Box 80103, Lincoln 68501

University of Nebraska Medical Center
Charles E. Andrews, M.D., Chancellor
42nd & Dewey Ave., Omaha 68105

Before prescribing, see complete prescribing information in SK&F CO. literature or PDR. The following is a brief summary.

WARNING

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. Associated widened QRS complex or arrhythmia requires prompt additional therapy. Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.

Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium; use with caution with 'Dyazide'. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin (ACTH)). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function. Thiazides may add to or potentiate the action of other anti-hypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.

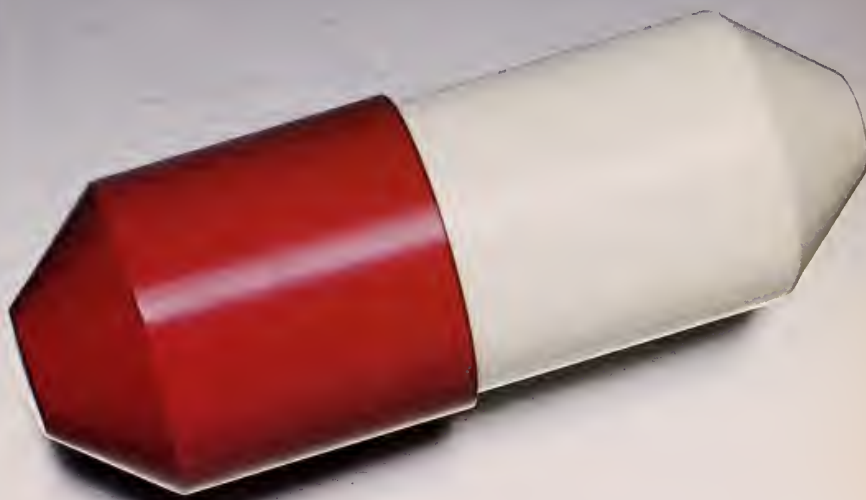
Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak™ unit-of-use bottles of 100.

BRS-DZ:L42

In Hypertension*... When You Need to Conserve K^+

Remember the Unique Red and White Capsule: Your Assurance of SK&F Quality

Serum K^+ and BUN should be checked periodically (see Warnings and Precautions).



Potassium-Sparing

DYAZIDE®

25 mg Hydrochlorothiazide/50 mg Triamterene/SKF

Over 20 Years of Confidence

a product of
SK&F CO.
Carolina, P.R. 00630

The unique
red and white
Dyazide® capsule:
Your assurance of
SK&F quality.



TIMING IS



EVERYTHING



Effective control time and time again¹

Effective control of fasting and postprandial glucose—patient after patient, meal after meal, year after year.

Insulin when it's needed

Insulin levels are rapidly elevated in response to a meal, then return promptly to basal levels after the meal challenge subsides.

Timed to minimize risks

Rapidly metabolized and excreted, with an excellent safety profile.¹ As with all sulfonylureas, hypoglycemia may occur.

In concert with diet in non-insulin-dependent diabetes mellitus

Glucotrol[®]
(glipizide) 5-mg and 10-mg
Scored Tablets



**SYNCHRONIZED
SULFONYLUREA THERAPY**



Please see brief summary of Glucotrol[®] (glipizide) prescribing information on next page.

ROERIG 
A division of Pfizer Pharmaceuticals
New York, New York 10017

References

1. Sachs R, Frank M, Fishman SK. Overview of clinical experience with glipizide. In *Glipizide: A Worldwide Review*. Princeton, NJ, Excerpta Medica, 1984, pp 163-172.

GLUCOTROL® (glipizide) Tablets

Brief Summary of Prescribing Information

INDICATIONS AND USAGE: GLUCOTROL is indicated as an adjunct to diet for the control of hyperglycemia in patients with non-insulin-dependent diabetes mellitus (NIDDM, type II) after an adequate trial of dietary therapy has proved unsatisfactory.

CONTRAINDICATIONS: GLUCOTROL is contraindicated in patients with known hypersensitivity to the drug or with diabetic ketoacidosis, with or without coma, which should be treated with insulin.

SPECIAL WARNING ON INCREASED RISK OF CARDIOVASCULAR MORTALITY: The administration of oral hypoglycemic drugs has been reported to be associated with increased cardiovascular mortality as compared to treatment with diet alone or diet plus insulin. This warning is based on the study conducted by the University Group Diabetes Program (UGDP), a long-term prospective clinical trial designed to evaluate the effectiveness of glucose-lowering drugs in preventing or delaying vascular complications in patients with non-insulin-dependent diabetes. The study involved 823 patients who were randomly assigned to one of four treatment groups (*Diabetes*, 19, supp. 2:747-830, 1970).

UGDP reported that patients treated for 5 to 8 years with diet plus a fixed dose of tolbutamide (1.5 grams per day) had a rate of cardiovascular mortality approximately 2-1/2 times that of patients treated with diet alone. A significant increase in total mortality was not observed, but the use of tolbutamide was discontinued based on the increase in cardiovascular mortality, thus limiting the opportunity for the study to show an increase in overall mortality. Despite controversy regarding the interpretation of these results, the findings of the UGDP study provide an adequate basis for this warning. The patient should be informed of the potential risks and advantages of GLUCOTROL and of alternative modes of therapy.

Although only one drug in the sulfonylurea class (tolbutamide) was included in this study, it is prudent from a safety standpoint to consider that this warning may also apply to other oral hypoglycemic drugs in this class, in view of their close similarities in mode of action and chemical structure.

PRECAUTIONS: Renal and Hepatic Disease: The metabolism and excretion of GLUCOTROL may be slowed in patients with impaired renal and/or hepatic function. Hypoglycemia may be prolonged in such patients should it occur.

Hypoglycemia: All sulfonylureas are capable of producing severe hypoglycemia. Proper patient selection, dosage, and instructions are important to avoid hypoglycemia. Renal or hepatic insufficiency may increase the risk of hypoglycemic reactions. Elderly, debilitated or malnourished patients and those with adrenal or pituitary insufficiency are particularly susceptible to the hypoglycemic action of glucose-lowering drugs. Hypoglycemia may be difficult to recognize in the elderly or people taking beta-adrenergic blocking drugs. Hypoglycemia is more likely to occur when caloric intake is deficient, after severe or prolonged exercise, when alcohol is ingested, or when more than one glucose-lowering drug is used.

Loss of Control of Blood Glucose: A loss of control may occur in diabetic patients exposed to stress such as fever, trauma, infection or surgery. It may then be necessary to discontinue GLUCOTROL and administer insulin.

Laboratory Tests: Blood and urine glucose should be monitored periodically. Measurement of glycosylated hemoglobin may be useful.

Information for Patients: Patients should be informed of the potential risks and advantages of GLUCOTROL, of alternative modes of therapy, as well as the importance of adhering to dietary instructions, of a regular exercise program, and of regular testing of urine and/or blood glucose. The risks of hypoglycemia, its symptoms and treatment, and conditions that predispose to its development should be explained to patients and responsible family members. Primary and secondary failure should also be explained.

Drug Interactions: The hypoglycemic action of sulfonylureas may be potentiated by certain drugs including non-steroidal anti-inflammatory agents and other drugs that are highly protein bound, salicylates, sulfonamides, chloramphenicol, probenecid, coumarins, monoamine oxidase inhibitors, and beta adrenergic blocking agents. *In vitro* studies indicate that GLUCOTROL binds differently than tolbutamide and does not interact with salicylate or dicumarol. However, caution must be exercised in extrapolating these findings to a clinical situation. Certain drugs tend to produce hyperglycemia and may lead to loss of control, including the thiazides and other diuretics, corticosteroids, phenothiazines, thyroid products, estrogens, oral contraceptives, phenytoin, nicotinic acid, sympathomimetics, calcium channel blocking drugs, and isoniazid. A potential interaction between oral miconazole and oral hypoglycemic agents leading to severe hypoglycemia has been reported. Whether this interaction also occurs with the intravenous, topical, or vaginal preparations of miconazole is not known.

Carcinogenesis, Mutagenesis, Impairment of Fertility: A 20-month study in rats and an 18-month study in mice at doses up to 75 times the maximum human dose revealed no evidence of drug-related carcinogenicity. Bacterial and *in vivo* mutagenicity tests were uniformly negative. Studies in rats of both sexes at doses up to 75 times the human dose showed no effects on fertility.

Pregnancy: Pregnancy Category C. GLUCOTROL (glipizide) was found to be mildly fetotoxic in rat reproductive studies at all dose levels (5-50 mg/kg). This fetotoxicity has been similarly noted with other sulfonylureas, such as tolbutamide and tolazamide. The effect is perinatal and believed to be directly related to the pharmacologic (hypoglycemic) action of GLUCOTROL. In studies in rats and rabbits no teratogenic effects were found. There are no adequate and well controlled studies in pregnant women. GLUCOTROL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Because recent information suggests that abnormal blood glucose levels during pregnancy are associated with a higher incidence of congenital abnormalities, many experts recommend that insulin be used during pregnancy to maintain blood glucose levels as close to normal as possible.

Nonteratogenic Effects: Prolonged severe hypoglycemia has been reported in neonates born to mothers who were receiving a sulfonylurea drug at the time of delivery. This has been reported more frequently with the use of agents with prolonged half-lives. GLUCOTROL should be discontinued at least one month before the expected delivery date.

Nursing Mothers: Since some sulfonylurea drugs are known to be excreted in human milk, insulin therapy should be considered if nursing is to be continued.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: In controlled studies, the frequency of serious adverse reactions reported was very low. Of 702 patients, 11.8% reported adverse reactions and in only 1.5% was GLUCOTROL discontinued.

Hypoglycemia: See PRECAUTIONS and OVERDOSAGE sections.

Gastrointestinal: Gastrointestinal disturbances, the most common, were reported with the following approximate incidence: nausea and diarrhea, one in 70; constipation and gastralgia, one in 100. They appear to be dose-related and may disappear on division or reduction of dosage. Cholestatic jaundice may occur rarely with sulfonylureas. GLUCOTROL should be discontinued if this occurs.

Dermatologic: Allergic skin reactions including erythema, morbilliform or maculopapular eruptions, urticaria, pruritus, and eczema have been reported in about one in 70 patients. These may be transient and may disappear despite continued use of GLUCOTROL. If skin reactions persist, the drug should be discontinued. Porphyria cutanea tarda and photosensitivity reactions have been reported with sulfonylureas.

Hematologic: Leukopenia, agranulocytosis, thrombocytopenia, hemolytic anemia, aplastic anemia, and pancytopenia have been reported with sulfonylureas.

Metabolic: Hepatic porphyria and disulfiram-like alcohol reactions have been reported with sulfonylureas. Clinical experience to date has shown that GLUCOTROL has an extremely low incidence of disulfiram-like reactions.

Endocrine Reactions: Cases of hyponatremia and the syndrome of inappropriate antidiuretic hormone (SIADH) secretion have been reported with this and other sulfonylureas.

Miscellaneous: Dizziness, drowsiness, and headache have been reported in about one in fifty patients treated with GLUCOTROL. They are usually transient and seldom require discontinuance of therapy.

OVERDOSAGE: Overdosage of sulfonylureas including GLUCOTROL can produce hypoglycemia. If hypoglycemic coma is diagnosed or suspected, the patient should be given a rapid intravenous injection of concentrated (50%) glucose solution. This should be followed by a continuous infusion of a more dilute (10%) glucose solution at a rate that will maintain the blood glucose at a level above 100 mg/dL. Patients should be closely monitored for a minimum of 24 to 48 hours since hypoglycemia may recur after apparent clinical recovery. Clearance of GLUCOTROL from plasma would be prolonged in persons with liver disease. Because of the extensive protein binding of GLUCOTROL (glipizide), dialysis is unlikely to be of benefit.

DOSE AND ADMINISTRATION: There is no fixed dosage regimen for the management of diabetes mellitus with GLUCOTROL. In general, it should be given approximately 30 minutes before a meal to achieve the greatest reduction in postprandial hyperglycemia.

Initial Dose: The recommended starting dose is 5 mg before breakfast. Geriatric patients or those with liver disease may be started on 2.5 mg. Dosage adjustments should ordinarily be in increments of 2.5-5 mg, as determined by blood glucose response. At least several days should elapse between titration steps.

Maximum Dose: The maximum recommended total daily dose is 40 mg.

Maintenance: Some patients may be effectively controlled on a once-a-day regimen, while others show better response with divided dosing. Total daily doses above 15 mg should ordinarily be divided.

HOW SUPPLIED: GLUCOTROL is available as white, dye-free, scored diamond-shaped tablets imprinted as follows: 5 mg tablet—Pfizer 411 (NOC 5 mg 0049-4110-66) Bottles of 100, 10 mg tablet—Pfizer 412 (NOC 10 mg 0049-4120-65) Bottles of 100.

CAUTION: Federal law prohibits dispensing without prescription.

More detailed professional information available on request.

© The Advertising Council, 1985

"YOU'D DIE IF YOU HAD MY JOB."



YOU COULD LEARN A LOT
FROM A DUMMY.
BUCKLE YOUR SAFETY BELT

ROERIG

Pfizer

A division of Pfizer Pharmaceuticals
New York, New York 10017

A Public Service Message Ad Council U.S. Department of Transportation

AUTOMATED MEDICAL OFFICE SYSTEMS

UNISYS

The Power of ²

Announcing the merger of two great computer companies, BURROUGHS and SPERRY. **UNISYS** is derived, from three words – UNITED, INFORMATION, SYSTEMS.

UNISYS now has over 60,000 installations in virtually every line of business. **UNISYS** offers a combined heritage in solving business problems totaling nearly 200 years.

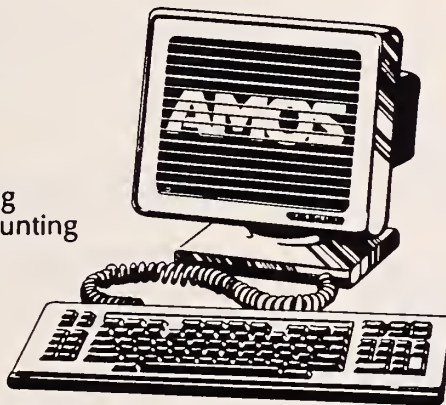
We have dedicated ourselves at **UNISYS** to retaining the position we now hold as the number one computer company in the area of customer satisfaction.

1 Data Pro 1985, 1986

PLUS + + MEDICAL COMPUTER MANAGEMENT

Major Components include:

- Patient Registration
- Patient Accounting
- Accounts Receivable
- Appointment Scheduling
- Collection Agency Accounting
- Medical Records
- Report Generator



Customer Services Include:

- Education and Training
- Installation Support
- Consulting Services
- Strategic Planning
- Marketing Consultation
- User Meetings
- Software Enhancements

For more information please clip and send this request form to

UNISYS CORPORATION

or call (402) 330-5395

10810 Farnam Drive

Attention; Beverly Schott

Omaha, NE 68154

Clinic Name _____

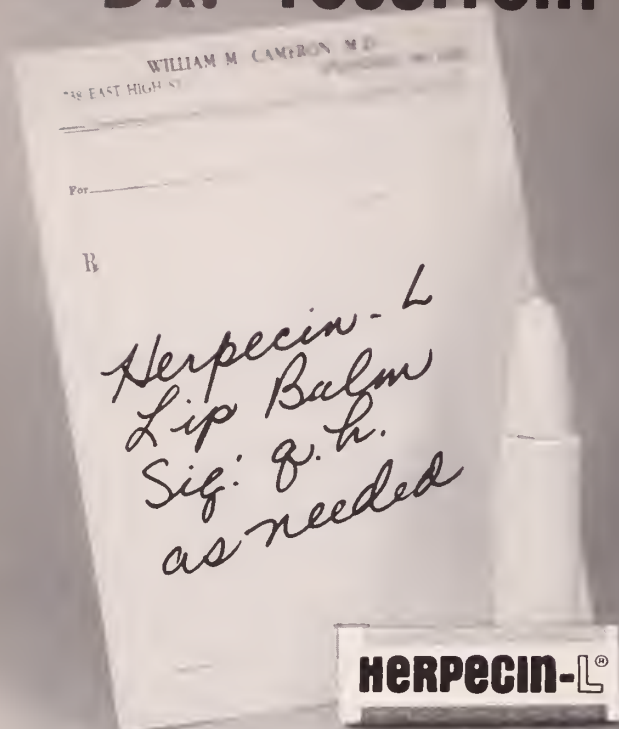
Contact Name _____

Address _____

City, State, Zip _____

Phone _____

Dx: recurrent herpes labialis



"HERPECIN-L is my **treatment of choice** for perioral herpes." GP, NY

"HERPECIN-L appears to actually **prevent** the blisters . . . used **soon enough**." DDS, MN

"HERPECIN-L . . . a **conservative approach** with **low risk/high benefits**." MD, FL

"Used at **prodromal symptoms** . . . blisters **never formed** . . . remarkable." DH, MA

"(In clinical trials) . . . **response was dramatic**. **HERPECIN-L** . . . proven **far superior**." DDS, PA

"All patients claimed **shorter duration** . . . at **prodromal symptoms** . . . **HERPECIN-L averted the attacks**." MD, AK

OTC. See P.D.R. for information. For samples to make your own clinical evaluation, write: CAMPBELL LABORATORIES, INC., P.O. BOX 812-MD, FDR STATION, NEW YORK, N.Y. 10150

In Nebraska HERPECIN-L is available at all *Keystone, Osco and Walgreens* and other select pharmacies.

PHRENOLOGY: PARA-NORMAL MYSTERIES: FACT OR FICTION



Robert W. McCoy

Robert W. McCoy of Golden Valley, Minnesota, will present a delightful review of the pseudo-science which once captivated Paris. Enjoy his display of a phrenology machine used in Nebraska in the early 1930's.

The occasion will be the 1987 Inaugural Banquet for the induction of Dr. L. Dwight Cherry, as President of the Nebraska Medical Association.

The Banquet will be held Sunday, April 26, at 7:00 p.m. in the Ballroom of the Cornhusker Hotel, Lincoln.

THE NEBRASKA MEDICAL JOURNAL

Cranial Magnetic Resonance Imaging and Multiple Sclerosis Lesions

CRANIAL (MRI) Magnetic Resonance Imaging is frequently employed when evaluating Multiple Sclerosis (MS) suspect patients. However, since we are still on a learning curve as regards interpreting their scans, I suggest the following reasoning to explain that the MRI abnormalities visualized may be secondary to MS:

1) MS is a white matter disease; the lesions have a predilection for favorite areas of deep white matter - eg: paraventricular, brain stem, cerebellum and spinal cord.

2) Evolution of the areas of pathology that are disseminated in time and space can be seen on serial cranial MRI studies. The lesions may increase in size, coalesce, new lesions may appear, may decrease in size, or disappear spontaneously or in response to steroid therapy. However, areas of sclerosis would not be expected to evolve but instead to remain static.

3) MRI lesions that appear similar in location and size to cranial CT lesions that are known to represent MS in the same patient, especially if both studies were performed within 1 - 2 days of one another without intervening steroid therapy.

4) The history and physical examination are highly suspicious for MS.

5) Lesions are seen in patients with known MS.

6) Pathologic correlation: multiple sclerosis may be confirmed at time of biopsy or autopsy.

7) The areas of MRI pathology may not all correlate with clinical findings; this increases the multiplicity of lesion sites, a hallmark of MS.

8) Other clinical testing may strongly indicate MS. - eg: cranial CT, cerebrospinal fluid studies, evoked potentials (visual, auditory and brainstem, and somatosensory), and visual fields.

9) Appearance of the lesions: multiple sclerosis may appear on T₂ weighted MRI

JOHN F. AITA, M.D.*

Department of Neurology, University of Nebraska Medical College, Omaha, Nebraska

images as solid white areas, a white "Bull's Eye", or as a white "fluffy" or cumulus cloud appearing lesions.

10) No other good explanation except MS to account for the clinical and MRI abnormalities.

This reasoning is recommended in order to help us interpret cranial MRI abnormalities seen in Multiple Sclerosis suspect patients.

However, evidence of MS may be lacking on cranial MRI for the following reasons:

1) Partial volume averaging: the lesion may be small enough so as to be lost in the "thickness" of the section.

2) Treatment with medications such as steroids.

3) Purely spinal MS (personal communication, Ian McDonald, M.D., June 20, 1985).

4) Lesion(s) may be unrecognized, unappreciated or misinterpreted.

5) Varying the time sequence of the TE weighted images or the window and level settings may cause lesions to become isodense with the surrounding parenchyma and disappear.

6) The patient does not have MS.

Thus, each physician ordering a cranial MRI for possible MS should communicate his concern regarding suspected MS directly with the MRI center and the Radiologist, and should review the films himself.

*Address for Correspondence: John F. Aita, M.D., Midwest Clinic, 105 So. 49th Street, Omaha, Nebraska 68132.

Perinatal Management and Outcome of Very Low Birthweight Infants

SINCE the 1960's, survival of infants weighing less than 1500 grams (very low birthweight infants) has been greatly enhanced by new technology and better understanding of the problems of tiny infants. Still, controversy exists among perinatologists and neonatologists regarding the best management for premature labor and premature rupture of membranes when the fetus is less than 30 weeks gestation. We have examined methods of management and subsequent outcome of infants born at less than 30 weeks gestation at the University of Nebraska Medical Center during a recent year.

The following parameters were addressed:

1. Distribution of gestational age and most accurate method of assessment.
2. Relationship of survival and outcome to:
 - a. birthweight and gestational age
 - b. presentation and mode of delivery
 - c. use of tocolytics and steroids
3. Incidence of infectious morbidity and relationship to steroid use.

Methods

Records were reviewed for 23 mothers and their 27 viable infants delivered at the University of Nebraska Medical Center at 30 weeks gestation or less during the period July 1, 1984 through June 30, 1985 (1.94% of 1339 total deliveries). Excluded were two infants with intrauterine fetal demise and one infant who died shortly after birth from severe multiple congenital anomalies.

The following data were collected for each mother-infant pair.

INFANT

Sex

Birthweight

1 and 5 minute Apgar Scores

Number of days requiring oxygen or a ventilator

Severity of Respiratory Distress

Date and cause of death, or outcome if lived

WBC count and culture results

LEIGH HOPPE, R.N., M.S.

JOAN V. EGGERT, M.P.H., M.D.

KRISTEN E. HOFFMAN, M.D.

Department of Obstetrics and Gynecology, University of Nebraska Medical Center, Omaha, Nebraska

LARRY D. EGGERT, M.D.*

Division of Neonatology, University of Nebraska Medical Center, Omaha, Nebraska

MOTHER

Age and parity

Date of last menstrual period

Presentation and mode of delivery

Fundal height at presentation

Ultrasound dating of the pregnancy

WBC count, culture results, C-reactive protein and temperature

Use of tocolytics and steroids

GESTATIONAL AGE

Antepartum assessment of gestational age was estimated by the fundal height, last menstrual period (LMP) and ultrasound. Antepartum ultrasound determination was performed in 15 of the infants to determine gestational age and estimated fetal weight.

Following delivery, gestational age was assigned by the pediatric resident and neonatologist using the Narayanan scale which uses the parameters of lens vascularity, ear cartilage, breast tissue and sole creases.¹

OUTCOME

Records of surviving infants were reviewed after their release from the hospital to determine the existence of residual sequelae such as bronchopulmonary dysplasia and development delay. The Bailey scoring method was used postnatally to determine gross and fine motor development.²

*Address Correspondence and Reprint Requests to: Larry D. Eggert, M.D., Department of Pediatrics, Division of Neonatology, University of Nebraska Medical Center, 42nd & Dewey, Omaha, NE 68105.

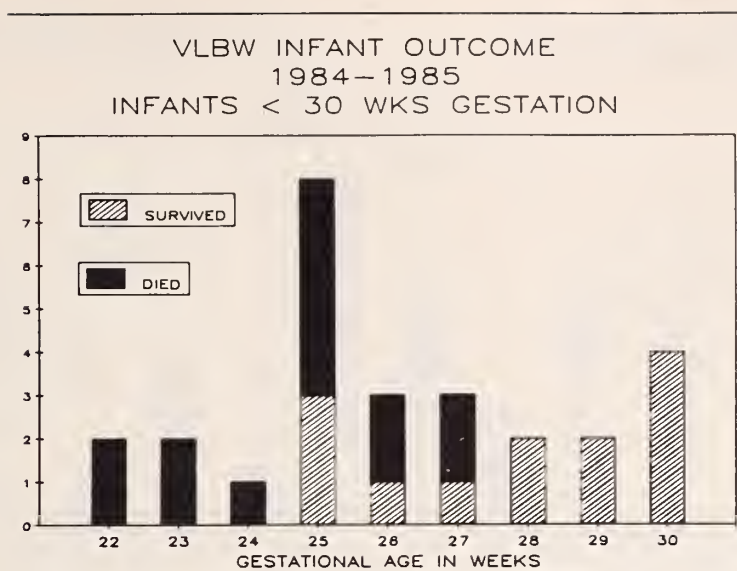


Figure 1
Gestational age distribution in weeks from 22-30 weeks, and number of infants who survived and died at each week of gestation.

DATA ANALYSIS

Data was analyzed for statistical significance using the Pearson Moment Product of Correlation and Chi Square. For independent pairs the Student's T-test was employed.

RESULTS:

MATERNAL POPULATION

The 23 mothers in this study ranged in age from 15 to 31 years with the mean age being 23 years. Fifty-seven percent were primiparous, 17% had 1 previous pregnancy and 26% had more than 1 previous pregnancy.

ANTEPARTUM ASSESSMENT OF GESTATIONAL AGE

The mean gestational age based on the first day of the last menstrual period was 27.2 ± 3.6 weeks, with a range of 18-32 weeks (Figure 1). When the LMP was obviously in error or unknown, gestational age was estimated from the ultrasound data.

There was a statistically significant correlation between fundal height and gestational age (Figure 2, $p < 0.01$). Some individual fundal height values were in marked disagreement with gestational age. This was particularly true of the women who presented with spontaneous rupture of membranes or with twin gestations.

Fifteen of the infants underwent ultrasound examination at UNMC at the time of presentation in premature labor. As shown in Figure 3, the estimated fetal weight determined by the

GESTATIONAL AGE VS FUNDAL HEIGHT

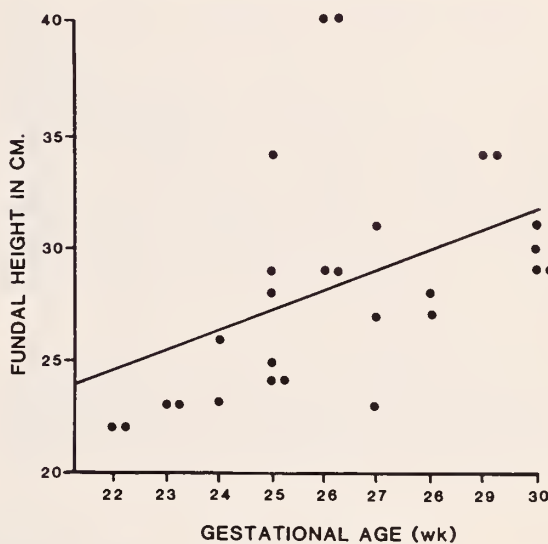


Figure 2
Fundal height in centimeters correlated with gestational age. Twin gestations had fundal height greater than dates, while patients with ruptured membranes had fundal heights less than dates.

radiologist correlated well with the actual birth weight ($p < 0.001$).

RELATIONSHIP OF SURVIVAL TO BIRTH-WEIGHT AND GESTATIONAL AGE

The mean gestational age assigned after birth, based on LMP (or physical examination and Narayanan score when dates were uncertain) was 26.3 ± 2.4 weeks, with a range of 22-

**BIRTHWEIGHT VS ESTIMATED
BY ULTRASOUND**

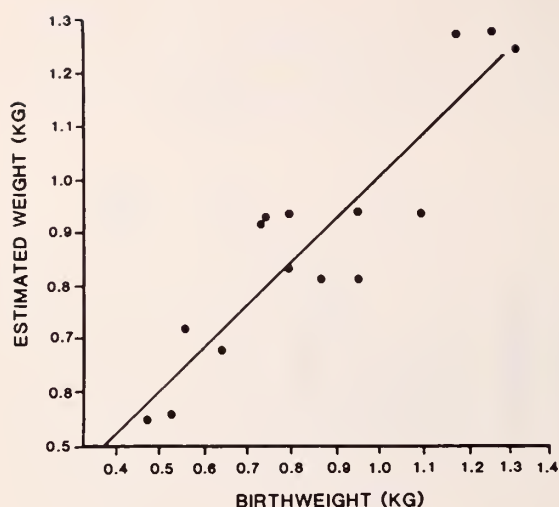


Figure 3

Estimated weight by antepartum ultrasound correlated well with actual birthweight.

**GESTATIONAL AGE VS BIRTHWEIGHT
(USING LMP & NARAYANAN SCORE)**

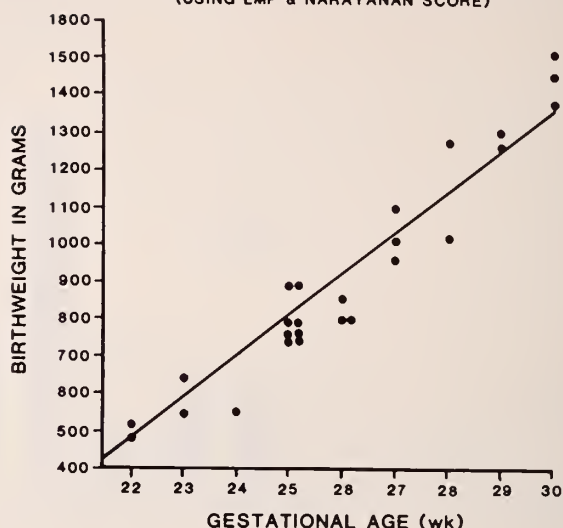


Figure 4

Birthweight is shown for each infant according to gestational age assigned after birth.

30 weeks. Five infants were 22-24 weeks gestational age, 11 infants were 25-26 weeks gestational age, 5 infants were 27-28 weeks, and 6 were 29-30 weeks gestational age. Mean gestational age of the survivors was 27.8 ± 0.6 weeks, versus 25.0 ± 0.5 weeks in the non-survivors ($p < 0.01$). Distribution of gestational age versus survival is shown in Figure 1. Table 1 compares our survival rate with that of other comparable tertiary care centers.

The mean birthweight was 931 ± 290 grams with a range of 480-1520 grams. Figure 4 shows the distribution of birth weights in relation to gestational age. Survival by 100 gm increments

correlated with birthweight, ($p < 0.001$) as shown in Figure 5. The one non-survivor weighing > 1000 grams was an infant with severe respiratory distress syndrome who developed multiple organ system failure.

The average birthweight of the 14 survivors was 1149 ± 267 grams compared to 723 ± 253 grams for the 13 non-survivors.

TOCOLYSIS AND STEROIDS

22-24 WEEKS GESTATIONAL AGE: Mothers of two of the five infants received intravenous tocolysis: 1 for 24 hours and 1 for 5 days. None of these infants received steroids, and none of

**Table 1
SURVIVAL ACCORDING TO
OBSTETRICAL GESTATIONAL AGE**

Gestational Age (wk)	Sell et al ⁹	UNMC	S.Ariz.Survey ⁹	
	% Survived	% Survived	Gest.Age (wk)	% Survived
22-24	15%	0	<26	15
25-26	35%	27%	26-27	62
27-28	60%	60%	28-29	80
29-30	75%	100%	30-31	90

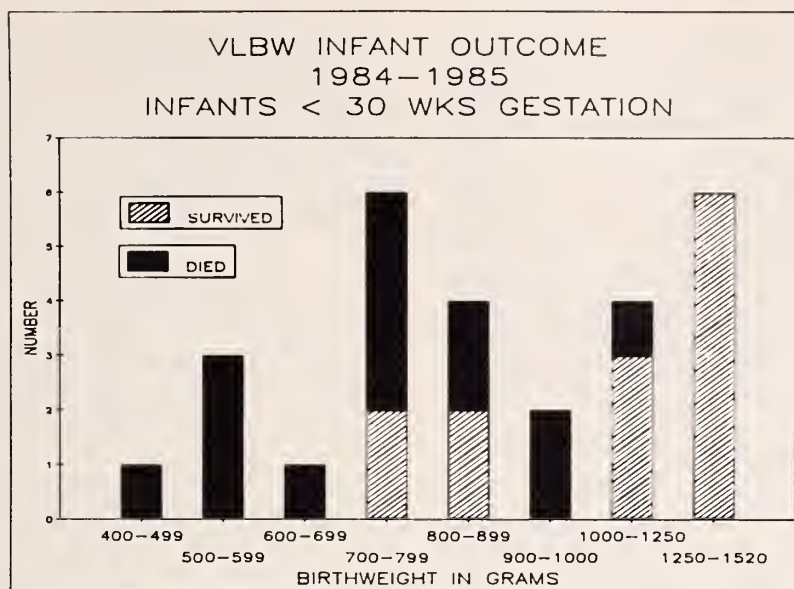


Figure 5
Survival is shown according to birthweight distribution (in 100 gm increments).

the infants survived. The birthweights in this group ranged between 480 and 640 grams.

25-26 WEEKS GESTATIONAL AGE: Mothers of all of the 11 infants in this group received intravenous tocolysis, although 9 of 11 received this therapy for 1 day or less prior to delivery. The 1 remaining mother received tocolysis for 7 days.

Four infants from this group received steroids for < 9 hours before delivery, and 2 of the 4 survived, weighing 760 and 790 grams. The two non-survivors who received steroids weighed 740 and 960 grams. Of the 7 infants who didn't receive steroids, one infant survived who weighed 800 grams, and 6 infants died whose birthweights ranged from 760 to 960 grams.

27-28 WEEKS GESTATIONAL AGE: All mothers of these 5 infants received from 1-5 days of tocolysis and 4 of the infants received steroids for more than 72 hours before birth. The two non-survivors weighed 960 and 1100 grams and had received steroids for 4 days prior to birth but had multiple problems of prematurity. The birth weight of the survivors ranged from 1010 and 1280 grams.

29-30 WEEKS GESTATIONAL AGE: All 6 infants in this group survived. Two had received both tocolysis and steroids for 24

hours prior to birth. Birthweight ranged from 1180 to 1520 grams.

PRESENTATION AND MODE OF DELIVERY

Of the 14 infants in vertex presentation, ten were delivered vaginally with 4 infants surviving. The birthweight of the survivors and non-survivors was 1160 ± 261 grams and 721 ± 220 grams, respectively.

Four infants who were vertex were delivered by cesarean section (1 for maternal herpes with ruptured membranes, 1 for pregnancy-induced-hypertension-not laboring and 2 for delivery of a second twin in breech position-1 with and 1 without ruptured membranes). None of these infants survived. Average birthweight was 762 ± 161 grams.

BREECH: Thirteen infants were in breech presentation. Of these, 10 were delivered by cesarean section with 9 survivors. The mean birth weight of the surviving cesarean delivered breech infants was 1026 ± 463 grams. The non-survivor weighed 860 grams.

None of the 3 breech infants born vaginally with a mean birth weight of 740 ± 220 grams survived. One infant weighed 520 grams and was 22 weeks gestation. Another was a second twin that weighed 720 grams. The third non-survivor, weighing 960 grams with an estimat-

ed gestational age of 25 weeks, suffered a prolapsed cord and had Apgar scores of 0/0. The estimated fetal weight of this infant by ultrasound was 750-896 grams and the mother refused a cesarean section.

MATERNAL AND INFANT INFECTIOUS MORBIDITY:

MATERNAL WHITE BLOOD COUNT: Of the 8 mothers receiving steroids the mean highest white blood cell count (WBC) was 17.5 ± 4.8 versus 16.1 ± 6.4 in the 15 mothers not receiving steroids ($p > 0.05$).

MATERNAL INFECTION: Nine of the 23 mothers were thought to have one or more clinical indicators of infection, ie: uterine tenderness, temperature greater than 38.3 °C, or opaque, foul-smelling membranes.

One of these nine mothers had a positive chlamydia culture; the remainder had negative cultures. Of the mothers not appearing clinically infected, one mother had a urinary tract infection, 1 mother had E. Coli isolated from the vagina, and 2 had positive herpes cultures.

INFANT INFECTION: There was no correlation between highest maternal and highest infant WBC count. In only the 1 mother with chlamydia was there a neonatal infection that could be related to a maternal infection. This mother did not receive steroids during her intrapartum management.

C-REACTIVE PROTEIN: Only 3 mothers had c-reactive proteins determined, and no conclusions are drawn from these data.

PERMANENT INFANT SEQUELAE:

Table 2 shows the outcome following premature delivery for the 13 surviving infants. The 4 surviving infants born between 25-27 weeks gestation had mild to severe bronchopulmonary dysplasia and mild to severe developmental delay. The 8 surviving infants born between 28 and 30 weeks gestation had no bronchopulmonary dysplasia or developmental delay, and 1 infant born at 28-30 weeks had mild developmental delay.

DISCUSSION

Premature birth is the leading cause of infant mortality and morbidity.^{3, 4} Neonatal complications following premature delivery include respiratory distress syndrome (RDS),

Table 2

PERMANENT SEQUELAE OF SURVIVORS

PATIENT	GEST. AGE	LONG TERM PROBLEMS
1.	25	Severe BPD, Major developmental delay.
2.	25	Severe BPD, Minor developmental delay.
3.	25	Mild BPD and developmental delay
4.	26	Severe BPD, Mild developmental delay
5.	27	Mild BPD, Minor developmental delay
6.	28	None
7.	28	None
8.	29	None
9.	29	None
10.	30	Mild motor delay in walking
11.	30.	None
12.	30	None
13.	30.	None

bronchopulmonary dysplasia, postnatal infections, and developmental delay. Even with the availability of neonatal intensive care units, there may be serious long term sequela and the costs of premature birth are significant.⁵

ASSESSMENT OF GESTATIONAL AGE:

To optimize outcome, it is desirable to accurately assess gestational age of women presenting in premature labor, and appropriately manage intrapartum care. When accurately recorded, the LMP is the most reliable determinant of gestation age.⁶ In our population the LMP correlated well with gestational age, but was unknown or unreliable in many cases. Of the patients who had ultrasounds, the ultrasound examination was very predictive of birthweight.

SURVIVAL AND BIRTHWEIGHT/GESTATIONAL AGE

Recent outcome and survival data show improving prognosis for increasingly small infants at tertiary centers. Survival for infants 24-26 weeks gestation ranges from 15-35%, for infants 27-28 weeks, 60-80%, and 75-100% for 29-32 weeks.^{3, 4, 7, 8, 9} Table 1 compares our survival by gestational age to that at the University of Arizona, as well as to survival reported in a survey of twenty-three newborn intensive care units.

Serious long term morbidity (moderate to severe intracranial hemorrhage, bronchopulmonary dysplasia, developmental delay or retinopathy of prematurity) occurs in approximately 20-30% of infants under 29 weeks. Generally both the incidence and degree of severity of long term morbidity decreases as gestational age increases.

TOCOLYTICS AND STEROIDS

As early as 1972 it was suggested that prenatal glucocorticoid treatment reduces the incidence of RDS and mortality in neonates weighing less than 1750 grams.^{10, 11, 12}

The best results are obtained when premature fetuses are exposed to steroids for 2 to 10 days prior to delivery. Unfortunately, delivery is not always easily postponed. With only 9 of our 23 mothers receiving both steroid and tocolytic therapy, and only 6 for more than 24 hours before delivery, the factors correlating most with survival in our population were birthweight and gestational age — not steroid therapy. This may change as our number of patients receiving steroids increases.

PRESENTATION AND MODE OF DELIVERY

Studies have suggested that the outcome for the premature infant in vertex presentation does not improve when those infants are delivered by cesarean section.¹³ None of our infants in vertex presentation delivered by cesarean section survived, but this group weighed an average of 400 grams less than those infants in vertex presentation delivered vaginally.

Conversely, it has been suggested that survival and outcome for premature infants in breech position is improved by cesarean section.¹³ None of our 3 infants in breech presentation who delivered vaginally survived, but their average weight was 300 grams less than infants born by cesarean section (with 9 of 10 surviving).

INFECTION AND RELATIONSHIP TO STEROIDS

Although 9 of the 23 mothers were thought to have some evidence of infection, only the 1 mother with chlamydia was documented to have a positive culture and be clinically infected (abnormal white count and high fever). This may indicate the yield on cervical cultures in our laboratory is low, or that

cervical cultures do not reflect endometrial infection. We had many mothers with uterine irritability and tenderness who had no growth on their cervical cultures.

Of the mothers receiving steroids, in no instance could we say the steroids contributed to any maternal or infant infectious morbidity. This agrees with other studies which have shown no increase in infectious morbidity when steroids were given to mothers who were afebrile, and without evidence of infection at the time of presentation.¹⁴

SUMMARY

We report on the management of 23 pregnancies that resulted in the birth of 27 infants at 30 weeks or less gestation from July 1984 through June 1985. For our very tiny premature infants less than 700 grams, no infant survived. For infants between 700-1000 grams, 42% survived. For infants in this birthweight range morbidity varied from moderate to severe. For infants greater than 28 weeks gestational age, or birthweight > 1000 gms., survival was >90% and residual morbidity minimal.

Last menstrual period was a good indicator of gestational age when dates were known in a singleton pregnancy. Ultrasound estimate of fetal weight performed in our facility correlated well with actual birthweight.

There was increased survival in breech infants delivered by cesarean section as compared to vaginal delivery although the mean birthweight of the vaginal group was considerably less. Conversely, the vertex infants delivered vaginally had increased survival, but weighed 400 grams more than the vertex infants delivered by cesarean section. These data do not allow any conclusions regarding mode of delivery.

Assessment of maternal infection was difficult, and often clinical impression was not supported by cervical cultures or infection in the infant. In no case did antepartum steroids adversely affect either the maternal or infant infectious morbidity.

It is our intent to continue to examine these factors in premature deliveries at University of Nebraska Medical Center. Although our survival and outcome are comparable to other tertiary centers, we identified several mothers

in this study, particularly in the group less than 28 weeks gestation, who presented too late for effective tocolysis, or who weren't given steroids.

By aggressive use of tocolysis and steroids, with the current availability of high frequency ventilation and the impending availability of artificial surfactant, we hope to significantly improve survival and outcome in the infants less than 28 weeks gestation.

It is our intent to continue to examine these factors in premature deliveries at University of Nebraska Medical Center. Although our survival and outcome is comparable to other tertiary centers, we identified several mothers in this study, particularly in the group less than 28 weeks gestation, who presented too late for effective tocolysis, or who weren't given steroids.

By aggressive use of tocolysis and steroids, with the current availability of high frequency ventilation and the impending availability of artificial surfactant, we hope to significantly improve survival and outcome in the infants less than 28 weeks gestation.

References

1. Narayanan I, Dua K, Gujral VV et al. Assessment of gestational age in newborn infants. *Pediatr* 69:27-32., 1982.
2. Bayley N. Bayley scales of infant development. Psychol. Corp., N.Y. 1969.
3. Saigal S, Rosenbaum P, Stoskopf B, Sinclair JC. Outcome of infants 501 to 1,000 gram birth weight delivered to residents of the McMaster Health Region. *J Ped* 105(6):969-976, 1984.
4. Gilstrap LC, Hauth JC, Bell RE, Ackerman NB, Yoden BA, Delemos R. Survival and short-term morbidity of the premature neonate. *Ob Gyn* 65(1): 37-44, 1985.
5. Korenbrot CC, Aalto LH, Laros RK. The cost effectiveness of stopping preterm labor with beta-adrenergic treatment. *N Engl J Med* 310(11): 691-696, 1984.
6. Chervenak FA, Berkowitz GS, Thornton J et al. A comparison of sonographic estimation of fetal weight and obstetrically determined gestational age in the prediction of neonatal outcome for the very low-birth weight fetus. *Am J Obstet Gynecol* 152(1): 47-50, 1985.
7. Buchwald S, Zorn WA, Egan EA. Mortality and follow-up data for neonates weighing 500-800 grams at birth. *Am J Dis Child* 138: 779-782, 1984.
8. Vasa R, Vidyasagar D, Winegar A, Peterson P, Spellacy WN. Perinatal factors influencing the outcome of 501-1000-gm newborns. *Clin Perinat* 13(2): 267-284, 1986.
9. Sell EJ. Outcome of very very low birth weight infants. *Clin Perinat* 13(2): 451-459, 1986.
10. Liggins GC, Howie RN. A controlled trial of antepartum glucocorticoid treatment for prevention of the respiratory distress syndrome in premature infants. *Ped* 50: 515-525, 1972.
11. Ballard RA, Ballard PL, Granberg JP, Sniderman S. Prenatal administration of betamethasone for prevention of respiratory distress syndrome. *J Ped* 94(1): 97-101, 1979.
12. Ballard PL, Ballard RA, Granberg JP, et al. Fetal sex and prenatal betamethasone therapy. *J Ped*, 97(3): 451-454, 1980.
13. Bodmer B, Benjamin A, McLean FH, Usher RH. Has use of cesarean section reduced the risks of delivery in the preterm breech presentation? *J Obstet Gynecol* 154(2): 244-50, 1986.
14. Morales WJ, Diebel D, Lazar AJ, Zadrozny D. The effect of antenatal dexamethasone administration on the prevention of respiratory distress syndrome in preterm gestations with premature rupture of membranes. *Am J Obstet Gynecol* 154(3): 591-595, 1986.

Characteristics of Persons Found Not Guilty by Reason of Insanity

THE insanity defense has raised a lot of controversy, especially so since the trial of John W. Hinckley, Jr., in 1982. The concept underlying the insanity defense goes back at least to Biblical times and the Talmudic records of Jewish law. According to the Roman law, society should not hold a man criminally responsible or morally blameworthy for the unlawful acts he commits because he lacks the capacity to tell right from wrong. Murderers who had unsound minds were pardoned by Henry III in the 13th century.

The most famous case in the history of the insanity defense is that of Daniel M'Naghten which occurred in England in 1843. He shot Edward Drummond, secretary to Prime Minister Robert Peel. M'Naghten was suffering from the delusion that the Pope, the Jesuits, and Prime Minister Peel were persecuting him. He was found not guilty by reason of insanity. Responding to the public and political uproar, the House of Lords asked the judges to answer questions about the case leading to what is now known as the M'Naghten Rule: To establish a defense on the ground of insanity, it must be clearly proven that, at the time of the committing of the act, the accused party was laboring under such a defect of reason, from disease of the mind, as not to know the nature and quality of the act he was doing; or if he did know it, that he did not know what he was doing was wrong. Many states, including Nebraska, follow the original or a modified version of the M'Naghten Rule.

The other tests of insanity are the Durham rule, the irresistible impulse test, the American Law Institute test, "guilty but mentally ill" and the "diminished capacity" defense.

In Nebraska, following a verdict of not guilty by reason of insanity (changed in 1981 to "not responsible by reason of insanity"), the court conducts a hearing to determine whether the person may be involuntarily committed on the basis of being both mentally ill and dangerous

UPMA DINGHRA, M.D.
LEONARD E. WOYTASSEK, M.D.
KLAUS HARTMANN, M.D.
Creighton University;
Lincoln Regional Center,
Department of Public Institutions

to self or others. If found mentally ill and dangerous, he or she is committed to a state psychiatric hospital or another appropriate facility for a 90 day evaluation and preparation of a treatment plan. The patient is kept in such a facility until determined to be no longer mentally ill and dangerous to self or others, at which time the person is unconditionally released by the court from confinement.¹

Who are the persons who successfully use the insanity plea? From what kinds of mental illness do they suffer? What happens after they are acquitted on an insanity plea? In this paper, we try to answer some of these questions, especially pertaining to the State of Nebraska. Authors in New York,² Connecticut,⁷ Oregon,⁸ and Ontario,⁵ have published relevant data for their states.

Method:

We reviewed the medical records of all individuals found not guilty/responsible by reason of insanity between January 1971 and December 1985, hospitalized in Nebraska state psychiatric hospitals. A total of 34 cases were found.

Results:

Of the 34 cases, 93% (n=31) were men and 9% (n=3) were women. (Percentages may not add up to 100% due to rounding off). Ages ranged from 19 years to 80 years, with a mean of 31.2 (S.D. 11.2) years. Mean age for women was 34 years and for men 30.9 years. Thirty-two percent of the patients fell in the 16-25

year age group, 44% in the 26-35 year age group, and 18% in 36-45 year age group. Three-fourths of the patients were between 18 and 35 years of age. Of the 34 cases, Caucasians represent 60% (n=20), Blacks 39% (n=13) and Hispanics 3% (n=1). This compares with a distribution of Caucasians, Blacks, and Hispanics in Nebraska of 93.98%, 3.05%, and 1.79%, respectively.

Fifty-seven percent (n=19) of the cases were single, 18% (n=6) were married, 21% (n=7) divorced and 3% (n=1) were widowed. The marital status of one patient was not known. Forty-eight percent (n=16) had one or more children (up to four). Eighty-one percent (n=27) were unemployed at the time of the crime. Eighty-seven percent (n=29) were unskilled or semi-skilled laborers, 9% (n=3) homemakers, and 3% (n=1) professional engineers.

All but one patient were involved in crimes against another person; several were charged with more than one crime. The three women were charged with murder, their victims being their spouses or children. Of the total, 57% (n=19) were arrested for murder, 18% (n=6) for assault, 18% (n=6) for robbery, 12% (n=4) for sexual assault, 9% (n=3) for kidnapping and 3% (n=1) for arson. In 60% (n=20) of the cases, victims were friends or relatives, 36% (n=12) were strangers, and 6% (n=2) were police officers.

Sixty-nine percent (n=23) of the patients had a prior history of arrests, with no information available for two cases. None of the women had prior difficulties with the law. Of the total, 18% (n=6) had been adjudicated not guilty by reason of insanity previously and had been released. Forty-five percent (n=15) were high school graduates, 42% (n=14) had not completed high school and 15% (n=5) had some college education.

Ninety percent (n=30) had a history of previous psychiatric hospitalization while 12% (n=4) had no prior history of psychiatric treatment. After being found not guilty by reason of insanity, the primary illness at the time of admission was some form of psychosis in 63% (n=21), personality disorder in 27% (n=9), organic brain syndrome in 3% (n=1), depression in 3% (n=1), and alcohol and drug abuse in 6% (n=2). However, 27% (n=9) had a

previous history of alcohol abuse, 9% (n=3) of drug abuse, and 45% (n=15) of both alcohol and drug abuse.

At the time of this study, 21 persons were inpatients, 11 had been discharged, one had escaped and one was deceased. Length of stay ranged from 9 days to 3,307 days with a mean of 983 (S.D. 975) days. Fifty-one percent (n=17) of the patients were committed by Douglas County. Nine percent (n=3) were committed by Hall County, 6% (n=2) by Keith County and 3% (n=1) each by Dodge, Lancaster, Platte, Box Butte, Lincoln, Dawson, Kimball, Saline, Frontier, Madison, Dakota, and Clay Counties.

Discussion:

Our findings are very similar to those of Phillips et al⁵ and Greenland,⁴ both from Ontario, and Pasewark et al³ from New York. Like other studies, we found a predominance of men. Three fourths of our patients were between 18-35 years of age, while the Ontario cohort⁴ found only two thirds between those ages. Phillips et al⁵ found a history of prior psychiatric disturbance in 81% of their population and our data indicate prior psychiatric hospitalization in 90%. The most frequent diagnosis in our group was some form of psychosis (63%), similar to the finding of Pasewark et al.³ Most of the offenses were committed against persons rather than property; this is true in other studies also.³⁻⁵ Greenland found that women more often killed their spouses or children, while men were more likely to attack strangers and persons in authority like police officers. Our study showed a similar pattern.

Our results differ from the New York study³ in that it describes a history of prior psychiatric hospitalization in only 44% of the men and 28% of the women, while our study showed psychiatric hospitalization in 90%. In the New York study³ 44% had a record of previous arrest, in Ontario⁴ 50% of the men and 5.5% of the women had previous arrest records; in contrast, 69% of our patients had arrest records.

Summary:

It is difficult to draw generalizations from these results because of the relatively small sample size. However, the similarity of our findings to other studies suggest those for whom the insanity defense is successful in

Nebraska are essentially the same as in other jurisdictions.

References

1. Revised Statutes of Nebraska, 1943, Supplement 1981.
2. Steadman HJ: Insanity acquittals in New York State, 1965-1978. *Am J Psych* 1980; 137:3, 321-326.
3. Pasewark RA, Pantle ML, Steadman HJ: Characteristics and disposition of persons found not guilty by reason of insanity in New York State, 1971-1976: *Am J Psych* 1979; 136: 5,655-660.
4. Greenland C: Crime and insanity defense, an international comparison: Ontario and New York State. *Bull Am Acad Psychiatry and Law* 1979; 7: 125-138.
5. Phillips MS et al: The Advisory Review Board and characteristics of patients on warrants of the Lieutenant Governor in Ontario. *Bull Am Acad Psychiatry and Law* 1985; 13: 373-384.
6. Pasewark RA: Insanity plea: a review of the research literature. *J Psych Law* 1981; 9: 357-401.
7. Phillips BL, Pasewark, RA: Insanity plea in Connecticut. *Bull Am Acad Psychiatry and Law* 1980; 8 (3): 335-344.
8. Rogers JL, Bloom JD: Characteristics of persons committed to Oregon's Psychiatric Security Review Board. *Bull Am Acad Psychiatry and Law* 1982; 10 (3): 155-164.

Should Your Children Seek To Become Physicians? ©

IN my constant discussions with privately practicing physicians, I so often hear a terribly unsettling statement: "I've enjoyed medical practice until recently, but I certainly hope my son (or daughter) won't go into medicine." While a certain level of frustration as to the changing scene is understandable, I cannot agree with the thought process behind that comment.

It puts directly before us a basic question whether the medical profession has really declined at all and, if so, whether the decline is so severe that the profession is now undesirable to existing physicians and their children. On my broad-based involvements with thousands of doctors under a wide variety of personal and professional concerns, I do not equate the changing scene with decline. And if one terms the changes (both already occurred and rapidly coming on) as "decline," they still leave medicine as a highly desirable future for bright, well-motivated young people.

The "Golden Era"

Consider how presently successful physicians came to our present times. Practicing in the 1960's and 1970's, they participated in the "golden era" of private practice. There was an explosive growth on new diagnostic capabilities, curative therapies and dramatic procedures which made medical practice intellectually demanding but exhilarating; an overwhelming supply of patients presented to each good physician — as well as too many not-so-good doctors. As a result, physicians succeeded both professionally and financially, often in spite of their own clinical or business capacities.

Physicians truly acted as the captains of health care. They were almost "god-like" in both the hospital and the office; they could bask in that role. There was tremendous ego satisfaction from their role and their crowded waiting rooms. The overwhelming demands on their time and energy merely fed the ego satisfaction even more.

These factors were naturally accompanied by disproportionately high incomes compared

LEIF C. BECK, J.D., C.P.B.C.

to other vocations. Though physicians pointed to their incredibly long hours of training and work to show that they were paid less than the average plumber, plumbers would have been delighted at the opportunity for such high total earnings.

The so-called "golden era" was, however, somewhat unreal and not totally desirable. Patients had little alternative but to wait untold weeks for appointments and hours to be seen. They had to trust in the diagnosis and advice given by a selected physician whether he (or occasionally she) was highly regarded by his peers or thought of as a poor clinician.

Personally, that era's physicians were so driven by the system and its unavoidable demands that their lives were too often totally one-dimensional. I considered it routine to hear complaints of an inability to participate in other worthwhile activities or even to have any other interests to occupy retirement years. Divorces, stale marriages and lack of parental involvement were common problems. In effect, professional practice activities became these physicians' entire lives.

Time Moves On

Other parts of society rather naturally reacted to the golden era's circumstances. Consumerism developed in all aspects of our economy interfering with the public's respect for physicians as authority figures. Even if one's doctor technically knew what should be best for a patient, that individual began insisting on the right to decide for himself or herself.

©Copyright reserved by The Health Care Group, 1986.

*The Author is a principal attorney and consultant affiliated with The Health Care Group, Bala Cynwyd, Pennsylvania, 19004.

Malpractice actions have skyrocketed in both number and physician frustration. As over-busy doctors lost the time and energy for one-on-one involvement with patients, augmented by technological gadgetry implying infallible results, the trend has been somewhat understandable.

Employers, insurance companies and government — the third parties which paid most medical bills — began to rebel against the costs involved. Physicians' fees were only a moderate part of the health care cost picture, but the total amounts either paid to or directed by doctors were growing "out of synch" with society's other perceived essentials.

Other businesses saw the health care industry's profit potential and resolved to compete for slices of it. When hundreds of billions of dollars are involved, much within the physicians' control, the inflow — even the domination — by "big business" could hardly be avoided. And while I do not necessarily espouse it, there is nothing logically improper in a business corporation's directing a medical practice staffed by physicians doing what they are trained to do — deliver technical services.

Despite these reactions within the system, more and more young people clamored for medical careers. An M.D. degree had for so long been synonymous with success in life — high income, intellectual challenge and human service — that the increasing doctor supply is hardly surprising.

The Turbulent Eighties

In effect, the times changed — as they always do. Every other industry in our society is undergoing wrenching change, some far more traumatic than for physicians, so medicine cannot expect otherwise. Medical practice's features today are different from those of the "golden era," which are vastly changed from those of the '30's and '40's, and so on. "The more things change, the more they remain the same."

So here we are in the "turbulent eighties." Medicine, just as the other professions, is in considerable turmoil as the various pincers of supply, demand, technology and activism attack traditional practice styles. These factors will not stop, indeed they are just warming up. Our society is too dynamic for any other scenario.

The New Generation

Young people enter this perspective from a different view of life. I sympathize with medical students, residents and fellows who entered medicine in reliance on the golden era, but a considerable segment of this generation suggests another set of priorities. Their interests seem to emphasize completeness of life, commitment to quality and service, aversion to personal/financial risk and satisfaction with only moderately high incomes.

A page one article in the Wall Street Journal on January 13, 1986, may have summarized some of these features by its headlines and subheadings: "More young doctors shun private practice work as employees; HMOs and big groups free them from bad hours, hassles of small business; home for dinner on time." Among the article's major quotations were these: "We want to be good parents and spouses as well. . . . Workaholics make good doctors, lousy fathers." Nothing in the article suggested — nor do we detect — any lesser commitment to concern for the patient or compulsion to provide high quality service.

And who are we to say their sense of priorities is wrong? A vastly increased proportion of these young physicians are women. They have become a valued resource in medicine, but they also possess natural — indeed biologically and socially necessary — instincts for family. And in tandem with the women's movement and two-income families, more physicians seem oriented to moderately paying positions of intellectual and/or human service orientation than in the past. I believe these people are a real prediction of the next generation of doctors.

The other segment of the current generation, including doctors who have entered practice in just the last few years, demonstrate the golden era's priorities in a shifted scene. They entered medical school in the background of high incomes and hearty self-determination. Some will hook on, or have hooked on, with excellent practices likely to ride on in the old style for quite a while; others have not and will not.

Young doctors committed to traditional medical practice style have the greatest stake in maintaining those features for the next twenty and thirty years. With so many pressures going the opposite way, it is not

surprising that these doctors must engage in such concerns as entrepreneurialism and marketing to attempt to retain their practices' dominant roles.

Your Children

But the next generation — the children whose physician-parents say they'd not encourage into medicine — will start with a clean slate. They will know that medical practice will be no financial gravy-train, but I believe they can still expect comfortable incomes. In fact, I predict that physicians' incomes will continue rather indefinitely to be the highest among generally compared professions and vocations even though they will be proportionately lower than in the past.

These young people can enter medicine because of their commitment either to the intellectual challenge of solving the human body's riddles or to the opportunity of serving other people's needs, or both. They should expect a greater likelihood that those commitments will be accomplished without the disturbances of overwhelming practice demands that changed their doctor-parents' lives. And they will hope to do so within more balanced lives in which family priorities and other valuable concerns and interests have a chance to blossom.

For those potential physicians who have the characteristics, I expect ample opportunities

to be valued as medical practice entrepreneurs and executives. Health care will always require good physician-leaders, and leadership traits are becoming increasingly valuable these days. There **will** be private medical practices — a great many of them — and they will offer opportunities for clinically excellent doctors and somewhat separately for effective leaders. Progression from one category to the other will be not unlike an engineer's promotion from his or her peer ranks into a large commercial corporation's executive track.

That's not a bad scenario for your children even though it is vastly different from yours. The very special values of a medical career will not change, and they may well be allowed to shine. Perhaps the recent words of C. Everett Koop, M.D., a vastly respected medical practitioner throughout the "golden era" and now Surgeon General of the United States, state the case so well:

"... I envy those starting a career in medicine. I regret some things that are going on — the lack of good doctor-patient relationships, the preoccupation with money and power, the growth of regulation, and so on. But I also know that medicine still offers the individual one of the most satisfying ways to make a life that I have ever encountered."*

*From *Pennsylvania Medicine*, December, 1985, page 31.

Ultrasound Assessment of Umbilical Artery and Vein Blood Flow

BLOOD flow velocity wave forms in the umbilical cord can be measured in utero using the technique of continuous wave doppler ultrasound and frequency spectrum analysis. Publications from the 1970's and 1980's have demonstrated the accuracy of this technique, and now clinical associations are developing. With appropriate equipment, quantitative blood flow can also be measured in the umbilical artery and vein, fetal aorta and maternal-utero placental circulation. Their relative flow and calculation of resistance in the system form the basis for clinico-pathologic correlations.

The technique of velocity frequency spectrum analysis analyzes patterns associated with the ratio of peak systolic and least diastolic blood flow. Increase in this ratio in umbilical artery studies indicates increased placental resistance; it has been associated with a disappearance of small arteries from the terminal villi of the placenta, correlating with adverse perinatal outcome, particularly when associated with hypertensive and intrauterine growth disorders.¹ Vascular resistance in the placenta generally shows a progressive decline from 24 weeks to term,² as reflected by umbilical artery wave forms. This trend is reversed as shown by the same authors in a series of 189 women, 24 of which had small for gestational age babies. In 32 of 43 fetuses suffering from intrauterine growth retardation Trudinger, et al showed an increase in placental resistance and even evidence of reversed diastolic blood flow in some severely affected cases.³ Trudinger, et al evaluated fetal outcome, as reflected by intrauterine growth retardation and Apgars less than 7, and suggested that fetal compromise could be more effectively recognized by antepartum study of umbilical artery wave forms in comparison to standard nonstress testing.⁴ Fleischer, et al reported a series of women, 63 of whom had hypertension, and found a

J. PATRICK LAVERY, M.D.

Associate Professor, Department OB/GYN, University of Louisville, Louisville, Kentucky 40292

significant difference in arterial wave forms consistent with increased resistance at term. Sensitivity of the testing was 78% and its specificity was 83%.

Chen, et al observed umbilical vein blood flow during the course of a pregnancy.⁵ They studied 163 normal patients and found a progressive increase in umbilical vein flow with gestation, achieving a peak flow rate of 400 cc's per minute at term. The technique carries a 5 to 15% system and calculation error, but the likelihood of greater accuracy toward term is suggested because of increased size of vessels. Jouppila and Kirkinen have correlated the value of umbilical cord vein flow and Rh-isoimmunization and suggested this may become a predictive modality for fetal assessment.⁶ The umbilical vein is known to dilate when associated with increased hepatic resistance associated with severe Rh isoimmunization.

With the development of perinatology as a subspecialty over the last twenty years, an increasing emphasis has developed to assess fetal well being. We have evolved from fetal tests of utero-placental function (with the biochemical analysis of estriol) to biophysical testing assessing fetal activity, fetal heart rate patterns, stress testing, and now the use of combined modalities for determining a biophysical profile. It appears the next step in this evolution is to ascertain blood flow and the rate of oxygen and nutrition delivery to the fetus. Further work will have to be done to evaluate the full potential of this modality, but early work appears to suggest it as a reliable

index of fetal well being. It is certainly comparable to fetal heart rate testing and of particular value in the assessment of the fetus whose mother is affected by hypertensive disorders and may be suffering from in utero growth deprivation.

References

1. Giles WB, Trudinger BJ, Baird PJ. Fetal umbilical artery flow velocity waveforms and placental resistance: pathological correlation. *Br J Obstet & Gynecol* 92:31-38, 1985.
2. Fleischer A, Schulman H, Farmakides G, Bracero L, et al. Umbilical artery velocity waveforms and intrauterine growth retardation. *Am J Obstet Gynecol* 151:502-505, 1985.
3. Trudinger BJ, Warwick BG, Cook CM, Bombardieri J. Fetal umbilical artery flow velocity waveforms and placental resistance: clinical significance. *Br J Obstet Gynecol* 92:23-30, 1985.
4. Trudinger BJ, Cook CM, Jones L, Giles WB. A comparison of fetal heart rate monitoring and umbilical artery waveforms in the recognition of fetal compromise. *Br J Obstet Gynecol* 93:171-175, 1986.
5. Chen HY, Lu CC, Cheng YT, Hsieh FJ, et al. Antenatal measurement of fetal umbilical venous flow by pulsed doppler and B-Mode ultrasonography. *J Ultrasound Med* 5:319-321, 1986.
6. Jouppila P, Kirkinen P. Umbilical vein blood flow in the human fetus in cases of maternal and fetal anemia and uterine bleeding. *Ultrasound in Med & Biol* 10:365-370, 1984.

X-RAY OF THE MONTH

Traumatic Rupture of the Thoracic Aorta

A 48 year old male was involved in a motor vehicle accident in which he experienced sudden deceleration (he collided with a bridge support). He was not wearing a seat belt. He was taken to the E.R. complaining of chest pains and had difficulty breathing.

Physical exam revealed an anxious male in no great distress. Blood pressure was 100/60 mmHg in the right arm. There was a small bruise and abrasion over the forehead and a bruised left shoulder. The physical exam was otherwise unremarkable.

The chest x-ray taken shortly after admission shows what appears to be a widened mediastinum and an indistinct aortic shadow. What is your diagnosis?

Answer: Traumatic Rupture of the Thoracic Aorta

Injury to the aorta is one of the most lethal injuries sustained from blunt and penetrating trauma. Although death is spontaneous in 80-90% of the patients with injuries to the aorta, the remaining 10-20% live long enough for treatment to be undertaken if the diagnosis is established. The plain film plays an important role in suggesting the diagnosis and aortography is usually diagnostic.¹⁻¹⁰

Etiology and Pathogenesis

Sudden deceleration of the body and compression of the chest are the most common causes of rupture of the aorta. About 70% of such injuries are the result of automobile accidents.⁹

Because of the variable mobility of the aorta, sudden deceleration produces shearing stresses. Most accounts agree that the isthmus is the site of maximum stress. The transverse part of the arch is relatively well fixed by the brachiocephalic vessels while the ascending and descending aorta are relatively mobile.⁹

Crushing injuries probably produce rupture by the sudden compression of the column of blood within the aorta (the water-hammer

MARY T. FEENEY, M.D.

JAMES J. PHALEN, M.D.

Veterans Administration Medical Center, Omaha

effect). The tear usually begins in the intima and proceeds outward. The extent of involvement may vary from intimal disruption to fracture of all layers of the aortic wall.⁹

Plain Film Findings:

A literature review discloses numerous plain chest radiographic findings in patients with aortic rupture. Any finding by itself may not be diagnostic and the relative value varies. The importance of an over-penetrated radiograph in order to properly visualize mediastinal structures and to detect subtle radiographic changes cannot be over-emphasized.^{1, 10}

The difficulty of evaluating the mediastinum on a supine, bedside radiograph may be overcome by using the mediastinal width: chest width ratio (M/C ratio). The M/C ratio is determined at the level of the aortic knob and



Traumatic Rupture of the Thoracic Aorta

obtained by dividing the mediastinal width by the chest width at this level. All patients with M/C ratio of greater than 0.25 are considered to have an abnormally widened mediastinal silhouette. Although mediastinal widening is a sensitive indicator of mediastinal bleeding, it is not specific for arterial bleeding.¹

A left apical cap is strongly suggestive of a ruptured aorta in the proper clinical setting. The cap is due to bleeding extending over the left lung. False positives do occur usually secondary to clavicle, et al, fractures or iatrogenic vascular injury.⁵

The right paraspinous interface may be displaced from the right margin of the vertebra if there is blood in the medistinum. This finding is quite useful in the clinical setting, but again not specific.²

Nasogastric tube displacement, depression of the left main stem bronchus, and loss of contour of the aortic knob are all radiographic findings seen with aortic rupture. Isolated finding should be regarded with suspicion, but are of limited value. Multiplicity of significant positive findings requires immediate further investigation.¹

Finally, it should be stressed that the initial x-ray examination may be normal or slight mediastinal widening not appreciated. Chest

radiograph should be repeated at regular intervals in a patient subjected to deacceleration chest injury, since the characteristic findings may develop over the first few days.⁹

References

1. Sefczek DM, Sefczek RJ, Deeb ZL: "Radiographic Signs of Acute Traumatic Rupture of the Aorta" *AJR* 141:1259-1262, 1983.
2. Barcia TC, Livoni JP: "Indications for Angiography in Blunt Thoracic Trauma" *Radiology* 147:15-19, 1983.
3. Strum JT, Marsh DG, Bodily KC: "Ruptured Thoracic Aorta: Evolving Radiological Concepts" *Surg* 85:363-367, 1979.
4. Seltzer SE, D'Orsi C, Kirshner R, DeWeese JA: "Traumatic Aortic Rupture: Plain Radiographic Findings" *AJR* 137:1011-1014, 1981.
5. Simeone JF, Deren MM, Cagie F: "The Value of the Left Apical Cap in the Diagnosis of Aortic Rupture" *Radiology* 139:35-37, 1982.
6. McDuff JB, Foster ED, Alley RD: "Traumatic Aortic Rupture: An Additional Roentgenographic Sign" *Ann Thoracic Surg* 24:77-80, 1977.
7. Tisnado J, Tsai FY, Als A, Roach JF: "A New Radiographic Sign of Acute Traumatic Rupture of the Thoracic Aorta: Displacement of the Nasogastric Tube to the Right" *Radiology* 125:603-608, 1980.
8. Peters DR, Gamsu G: "Displacement of the Right Paraspinous Interface: A Radiographic Sign of Acute Traumatic Rupture of the Thoracic Aorta" *Radiology* 134:599-603, 1980.
9. Fishbone G, et al: "Trauma to the Thoracic Aorta and Great Vessels" *Rad Clin NA* 11 (3):543-553, 1973.
10. Marnocha KE, Magunte DD: "Plain Film Criteria for Excluding Aortic Rupture in Blunt Chest Trauma" *AJR* 144 (1):19-21, 1985.

President's Page

P.R.O. & MEDICARE

I wish to direct this message toward the concerns Nebraska physicians have expressed regarding the actions of the Nebraska Peer Review Organization since the Sunderbruch Corporation-Nebraska (TSCN) has administered the program. The Sunderbruch Corporation-Nebraska (TSCN) was designed by the U.S. Health Care Financing Administration to be the Peer Review Organization (PRO) for Nebraska effective October 1, 1986 through 1988. The Sunderbruch Corporation-Nebraska as the PRO has a working agreement with the Nebraska Foundation for Medical Care, which provides Nebraska physicians to serve in committee and policy areas and to perform peer review. The Nebraska Foundation for Medical Care is an entire separate entity from the Nebraska Medical Association and none of your elected officers for the Board of Directors of the Nebraska Medical Association serve on the Foundation.

I, and your Board of Directors of the Nebraska Medical Association, feel very strongly that we and all Nebraska physicians have as our prime responsibility to serve as the advocate on behalf of our patients. When cost-containment procedures for Medicare expenditures interfere with the quality of care for our patients it is proper for us to register a vigorous protest. The Medicare legislation and all modifications originated in Congress and the Senate, and the rules and regulations have been instituted by the bureaucrats in the U.S. Health Care Financing Administration. The Nebraska Medical Association office has been receiving copies of communications from Nebraska physicians sent to the PRO expressing concerns about interference with the quality of care for Medicare patients, and have noted that the physicians also are sending copies to their congressional representatives. This does result in an exchange of views and information that should be beneficial.

Doug Bereuter, 1st Congressional District Representative, requested a meeting with the Nebraska Medical Association officers and physician members of his district. We met with him on February 28, 1987, a very candid discussion was held, and a follow-up letter



Hiram R. Walker, M.D.

would indicate an increased awareness regarding the problems physicians are encountering in caring for our Medicare patients. He did enclose copies of a letter he had sent to Dr. William Roper of the Health Care Financing Administration expressing concerns about some of the Health Care Financing Administration's criteria for retrospective review for medical treatment of Medicare patients, and he has also corresponded with the Sunderbruch Corporation-Nebraska regarding their role in the PRO Administration.

We also have a request from Virginia Smith for a meeting with a group of physicians and hospital administrators from the 3rd Congressional District scheduled for March 21, 1987 at Grand Island (my President's Message must be submitted before that meeting). Representative Smith had indicated that the executive directors of both the Iowa Foundation for Medical Care, who hold the PRO contract with the Health Care Financing Administration for Nebraska, and the Sunderbruch Corporation have agreed to be at the meeting.

I have appointed Ad-Hoc Committee - RE: Blue Shield of Iowa - Medicare chaired by Dr. Dwight Cherry who has held two meetings and we are scheduled to go to Des Moines, Iowa for a discussion and further exchange of views

regarding their function as fiscal-intermediary for Part B of Medicare on April 3, 1987.

Your Board of Directors has, and will continue, to make every possible effort to assume that quality of health care for our Medicare patients will not be compromised and that changes that can be made in PRO operations to make it more responsive to the

demands and concerns of the Nebraska health care community be implemented.

I would ask for your continued support to the Nebraska Medical Association and your Board of Directors in achieving these goals.

Hiram R. Walker, M.D.
President



The Auxiliary

Confluence: the coming together of persons or things

Chicago

Hurried meetings

Energetic women and men

Quality presentations

Five minutes to put your feet up

New friends and reacquaintance with old ones.

All of this occurred in three busy days in February. Four hundred plus auxiliaries came together for Confluence II 1986-87, the semi-annual leadership training session for the AMAA. The group consisted of state and county presidents and presidents elect from every state.

Plenary Sessions were presented on "Know your National Auxiliary", "Enhancing the physicians image — the AMA plan", "If you

don't value you, nobody will", "Preparing for the presidency", and "Legislative update".

We were allowed to choose four sessions of small groups on various topics. I chose to attend sessions on quality programs, communication, parliamentary procedure, marketing membership, seatbelt use, and substance abuse. Needless to say, I felt I had been informed on every topic pertinent to the medical auxiliary.

I came home ready to plan a super year for Lancaster County. Beyond this new friends were made and one comment came up over and over. "It's nice to know there are others who have the same sets of problems and joys; why 'It's no different in Nebraska?'" The things that auxiliary offers can be found in other organizations but the strongest bond we have is that of our spouses in medicine.

Linda Paul

UNIVERSITY OF NEBRASKA MEDICAL CENTER NEWS

NMA-MSc TO SPONSOR A RELAY RUN WITH ALL PROCEEDS GOING TO THE AMERICAN CANCER SOCIETY

April 11, 1987 will be the date of a relay run from Omaha to Lincoln, involving all UNMC students and the UNL Law College. All participants will be seeking donations from interested sponsors state wide, with all proceeds collected going to American Cancer Society.

We would like to extend an invitation to all Nebraska physicians to support this event, as a participant or as a sponsor. We feel this is an

excellent opportunity for professionals and professional students to interact, while raising funds for a most worthwhile cause.

Thank you for your support.

Sincerely,

Greg Mueller, NMA-MSc President
Doug Foulk NMA-MSc Vice-president
Lynn Rosenlof, NMA-MSc Treasurer

Those physicians interested in participating either directly, or as a sponsor can contact:

Lynn Rosenlof
4525 Mason Street
Omaha, Nebraska 68106
(402) 556-2831

LETTER TO THE EDITOR

To the Editor:

An interesting element of the article "Maternal Mortality Review 1983-1984-1985" in the February, 1987, Nebraska Medical Journal is the data relating to deaths from automobile accidents.

If you consider each pregnancy-related death to involve two people, the pregnant woman and the fetus, automobile accidents accounted for approximately one-third of the total pregnancy-related deaths in the time period studied (see Table).

NEBRASKA MATERNAL MORTALITY					INFANTS		
MATERNAL DEATHS				Live	Dead		+ OB
Auto	Other	Geriatric			Auto	Other	
1983	4	3	0	0	4		3
1984	2	1	6	4	2		3
1985	<u>0</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>0</u>	<u>2</u>	
	6	6	8	6	6		8

20 Dead Pregnant Women Automobile Accident Deaths:
14 Dead Infants 6/20 Dead Women = 30%
34 Total Deaths 12/34 Total Deaths = 35%
 6/14 Dead Babies = 43%

Unintentional injuries are the leading cause of premature mortality in the United States.¹ Injuries from motor vehicle collisions are the fourth leading cause of death in the United States,² and younger adults are less likely to use seat belts.³ It would be interesting to know the seat belt histories of these pregnant women killed in automobile accidents, particularly in light of our good citizens' recent vote to repeal our seat belt law.

Sincerely,

John Walburn, M.D.
Assistant Professor, Pediatrics
Director, Ambulatory Pediatrics

JW:mc

1. CDC. Premature Mortality in the United States. MMWR 1986; 35:25.

2. National Center for Health Statistics. Annual Summary, 1984. Monthly Vital Statistics Report 1985; 33:20-1.

3. CDC. Seat Belt Use - United States. MMWR 1986; 301-4.

Welcome New Members

Paul C. Considine, M.D.
4009 Avenue B, #11
Scottsbluff, NE 69361

Mary J. Case, M.D.
Clarkson Hospital
Omaha, NE 68105

Helen Sinh-Dang, M.D.
601 No. 30th
Omaha, NE 68131

Gary S. Lerner, M.D. (reinstated)
13006 Pacific St.
Omaha, NE 68154

Gilles R. G. Monif, M.D.
601 No. 30th St.
Omaha, NE 68131

Chandra K. Nair, M.D.
601 No. 30th
Omaha, NE 68131

Jeffrey C. Popp, M.D.
8300 Dodge St., #200
Omaha, NE 68114

Patrick A. Smith, M.D.
8601 W. Dodge Rd., #248
Omaha, NE 68114

Michel C. Tran, M.D.
8552 Cass St.
Omaha, NE 68114

Steven D. Weyhrich, M.D.
2734 No. 62nd
Omaha, NE 68104

Bradley D. Rodgers, M.D.
414 East Ave.
Holdrege, NE 68949

Richard A. Bunting, M.D. (reinstated)
622 Doctors Bldg.
Omaha, NE 68131

Herbert J. Quigley, M.D.
VA Hospital
4101 Woolworth Ave.
Omaha, NE 68105

Kevin Coughlin, M.D.
Geneva, Nebraska 68361

Gerald E. Matzke, M.D.
Sidney, Nebraska 69162

In Memoriam

*By medicine life may be prolong'd
yet death*

Will seize the doctor too.

—Shakespeare

J. HEWITT JUDD, M.D. - (Born May 12, 1899 - died December 20, 1986) — Medical Specialty - Ophthalmology. Doctor Judd was a graduate of the University of Nebraska College of Medicine in 1924 and practiced in Omaha. He was a member of the Nebraska Medical Association and the American Medical Association. Doctor Judd is survived by his daughter, Katherine Shoen, Larkspur, CA; a brother, Doctor Delbert K. Judd, Kankakee, IL; and three grandchildren.

Coming Meetings

UNIVERSITY OF NEBRASKA MEDICAL CENTER

FAMILY PRACTICE REVIEW — A COMPREHENSIVE UPDATE — March 30-April 10, and April 27-May 8, 1987 at the Center for Continuing Education, UNMC, Omaha, Nebraska. Sponsored by the Department of Family Practice, UNMC. The fee to attend this 100 credit hour AMA Category I and AAFP Prescribed Program is \$850. (one week or split week registrations are available with special arrangements).

UNIVERSITY OF NEBRASKA COLLEGE OF MEDICINE ALUMNI ASSOCIATION — Annual Business Meeting and Reception for New Honorary Alumni, Saturday, April 25, 1987 in conjunction with the NMA Meeting; Alumni meeting at 4:30 p.m. at the Cornhusker Hotel in Lincoln, Conference Rooms 2 and 3. Reception at 5:30 p.m. in Conference Room 4. Alumni and spouses are encouraged to attend. Guests are welcome.

UPDATE ON GENERAL PEDIATRICS — June 28-July 2, 1987 at Jackson Hole Racquet Club, Jackson, WY. Sponsored by the Department of Pediatrics, UNMC.

SPORTS MEDICINE UPDATE 1987 — July 5-9, 1987 at the Jackson Hole Racquet Club, Jackson, WY. Sponsored by the Department of Orthopaedic Surgery and Rehabilitation, UNMC.

CARDIOVASCULAR DISEASE PREVENTION IN THE YOUNG AND THE ADULT — August 2-5, 1987 at the Snowmass Club, Snowmass, Colorado. Sponsored by UNMC.

EMERGENCY MEDICINE REVIEW — September 21-26, and October 5-10, 1987 at the Center for Continuing Education, UNMC, Omaha, NE 45 hours of ACEP Category I credit and 45 prescribed hours by the AAFP and AMA Category I.

For further information or to register for the above courses contact: Marge Adey or Brenda Ram, Center for Continuing Education, Uni-

versity of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, Nebraska 68105. Telephone (402) 559-4152.

UPCOMING UNMC CONTINUING EDUCATION COURSES

ADVANCED CARDIAC LIFE SUPPORT — Apr. 15, 1987 — Recertification. Omaha, Nebraska. Registration Fee: \$50. 7.2 Hours AMA Category I.

ADVANCED TRAUMA LIFE SUPPORT — March 23-24, May 28-29, September 28-29, 1987. Omaha, Nebraska. Fee: \$475. 17.0 Hours AMA Category I. 17.0 Prescribed Hours AAFP. 17.0 Hours ACEP Category I. For further information on these three courses contact Cindy S. Hanssen, University of Nebraska Medical Center, Center for Continuing Education, 42nd & Dewey Avenue, Omaha, Nebraska 68105-1065. Phone (402) 559-4152. In Nebraska, call: 800-228-1095. All other states, call: 800-228-9630.

ADVANCED CARDIAC LIFE SUPPORT — May 18-19, 1987 — Initial Certification. Omaha, Nebraska. Registration Fee: \$130. 14.5 Hours AMA Category I.

ADVANCED CARDIAC LIFE SUPPORT — May 20, 1987 — Instructor Course. Omaha, Nebraska. Registration Fee: \$60. 6.0 Hours AMA Category I.

ADVANCED CARDIAC LIFE SUPPORT — June 1, 1987 — Recertification. Omaha, Nebraska. Registration Fee: \$50. 7.2 Hours AMA Category I.

For further information, contact Ann Fitzgerald, University of Nebraska Medical Center, Center for Continuing Education, 42nd & Dewey Avenue, Omaha, Nebraska 68105-1065. Phone (402) 559-4152. In Nebraska, call: 800-228-1095. All other states (except Alaska), call: 800-228-9630.

CREIGHTON UNIVERSITY

THE ROLE OF ECHOCARDIOGRAPHY
IN THE DIAGNOSIS AND MANAGE-
MENT OF CARDIAC EMERGENCIES —
Apr. 10-11, 1987, Saint Joseph Hospital,
Omaha, Nebraska. Program Director: Syed
M. Mohiuddin, M.D. Hours: TBA. Fee:
TBA.

INFECTIOUS DISEASE SYMPOSIUM —
April 15, 1986, Saint Joseph Hospital,
Omaha, Nebraska. 6 credit hours Category
1. Fee: TBA.

PEDIATRIC INFECTIOUS DISEASE
SYMPOSIUM — May 8-9, 1987, Boys
Town Conference Center, Boys Town, Ne-
braska. Program Director: Dr. Steven Char-
trand. 12 credit hours Category 1. Fee: TBA.

FAMILY MEDICINE UPDATE — May 22-
24, 1987, Okoboji, Iowa. Program Director:
Fred J. Pettid, M.D., Hours: TBA, Fee:
TBA.

MAURICE E. GRIER SYMPOSIUM (OB-
GYN) — June 6, 1987, Marriott Hotel,
Omaha, Nebraska. Program Director: James
W. Daly, M.D. Hours: TBA. Fee: TBA.

WHAT YOU NEED TO KNOW ABOUT
PERINATAL ULTRASOUND — June 12-
13, 1987, Holiday Inn Central, Omaha, NE.
Program Director: Washington C. Hill, M.D.,
Hours: TBA Fee: TBA. Omaha, NE

A DAY WITH THE PERINATOLOGISTS —
September 25-26, 1987, Red Lion Inn,
Omaha, NE. Program Director: Washington
C. Hill, M.D., Hours: TBA, Fee: TBA.

VISITING PROFESSOR SCHEDULE — 1987

April 10-11, 1987

Clement Hiebert, M.D., Chief, Cardiovascular
Surgery, Maine Medical Center.

April 17-18, 1987

Hiroshi Akiyama, M.D., Chief of Surgery,
Toranomon Hospital, Tokyo, Japan.

May 8-9, 1987

Roland Folse, M.D., Professor and Chairman,

Surgery, Southern Illinois University School of
Medicine Chairman of Residency Review
Committee.

September 11-12, 1987

John Cameron, M.D., Surgeon-in-Chief, The
John Hopkins University, Department of
Surgery, Baltimore, Maryland.

October 23-24, 1987

Hiram C. Polk, Jr., M.D., Professor and
Chairman, Department of Surgery, University
of Louisville, School of Medicine, Louisville,
Kentucky.

For further information or to register,
contact: Creighton University School of
Medicine Division of CME, Omaha, NE
68178, 402-280-2550 or outside Nebraska
Toll free 800-228-7212, Ext. 2550. The
Creighton University School of Medicine is
accredited by the Accreditation Council for
Continuing Medical Education to sponsor
continuing medical education for physicians.

LINCOLN GENERAL HOSPITAL

THE SIXTH ANNUAL CORNHUSKER/
CANADIAN CLINICAL CONFERENCE
— June 20-27, 1987 at Lynn Lake, Mani-
toba, Canada. Fee: \$150. For information
contact: Sharlene Knippelmeyer, RN, BS,
Education and Staff Development, Lincoln
General Hospital, 2300 South 16th Street,
Lincoln, NE 68502, (402) 473-5638.

UNIVERSITY OF KANSAS

For information concerning the following
continuing education offerings sponsored by
the University of Kansas Medical Center
contact: Carole Rosen, Promotions Coordina-
tor, Office of Continuing Education, University
of Kansas Medical Center, 39th and Rainbow
Boulevard, Kansas City, KS 66103 (913) 588-
4480.

WHAT'S NEW IN DIABETES — Apr. 1,
1987 — Sponsor: University of Kansas
Medical Center, Office of Continuing Edu-
cation, 39th and Rainbow Blvd., Kansas
City, KS 66103. Credit: AMA, AAFP, CNE,

ADA. Location: Battenfeld Auditorium, University of Kansas Medical Center, 39th & Rainbow, Kansas City, KS. Contact: Eileen Buttron, Office of Continuing Education, University of Kansas Medical Center. Contact: Eileen Buttron, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103. 913/588-4494.

PEDIATRICS — Apr. 2-3, 1987 — Sponsored by the University of Kansas Medical Center. Location: Battenfeld Auditorium, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103. Credit: AMA, AAFP, CNE. Contact: Eileen Buttron, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103.

37TH ANNUAL ANESTHESIOLOGY SYMPOSIUM — Apr. 24-26, 1987 — Sponsored by the University of Kansas Medical Center. Location: Crown Center Hotel, Kansas City, Missouri. Credit: AMA, AAFP, AANA. Contact: Eileen Buttron, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103.

ANTICOAGULANT AND ANTITHROMBOTIC THERAPY: STATE OF THE ART — April 25, 1987. Sponsored by the University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow, Kansas City, Kansas 66103. Location: Alameda Plaza Hotel. Credit: Category I AMA, AAFP, CNE. Contact Eileen Buttron, University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103 (913) 588-4480.

TWELFTH ANNUAL FAMILY PRACTICE SYMPOSIUM — April 29-30, 1987. Sponsor: University of Kansas Medical Center. Location: Crown Center Hotel, Kansas City, Missouri. Credit: AMA, AAFP. Contact: Eileen Buttron, University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103, (913) 588-4494.

THIRTY-FIRST ANNUAL INFECTIOUS DISEASES SYMPOSIUM — May 1, 1987. Sponsor: University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow, Kansas City, Kansas 66103. Location: Crown Center Hotel. Credit: Category I AMA, AAFP. Contact: Eileen Buttron, University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103, (913) 588-4494.

KANSAS MEDICINE — May 15, 1987 — Sponsor: University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, KS 66103. Credit: AMA and AAFP. Location: Battenfeld Auditorium, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103. Contact: Eileen Buttron, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103. 913/588-4494.

INTEROPERATIVE RADIATION: A NEW COMBINED TREATMENT APPROACH TO CANCER — July 18, 1987. Sponsored and held at by the University of Kansas Medical Center, Kansas City, Kansas. Credit: AMA, AAFP, CNE. Contact: Eileen Buttron, University of Kansas Medical Center Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103 (913) 588-4480

SCHEDULED MEETINGS

NEBRASKA ACADEMY OF FAMILY PHYSICIANS 39th ANNUAL SCIENTIFIC ASSEMBLY — May 29 and 30, 1987 at the Holiday Inn Central, 72nd & Grover, Omaha, Nebraska. For further information contact: Phyllis Hansen, Executive Director, 401 No. 117th, #202, Omaha, NE 68154 (402) 333-5856.

PICTURE GALLERY



AMA President-Elect, William S. Hotchkiss, M.D., (left) presenting 1986 Membership Award to L. Dwight Cherry, M.D., President-Elect of the Nebraska Medical Association. The award, which recognizes an increase of Nebraska AMA members in 1986 over 1985, was presented during the National Leadership Conference in February, 1987.

PROGRAM

119th Annual Session

The Nebraska Medical Association



Honoring
KENNETH E. NEFF



IN CONJUNCTION WITH:

Nebraska Allergy Society
Nebraska Society of Anesthesiologists
Missouri Valley Dermatologic Society
Nebraska Chapter, American College of
Emergency Physicians
American Heart Association, Nebraska
Affiliate, Lincoln Division
Nebraska Society of Internal Medicine
Nebraska Chapter, American College of Physicians
Nebraska Section, American College of
Obstetricians & Gynecologists
Nebraska Academy of Ophthalmology
Nebraska Organ Retrieval System, Inc.
Nebraska Chapter, American Academy of Pediatrics
Nebraska Perinatal Organization
Nebraska Society of Plastic & Reconstructive Surgeons
Nebraska Psychiatric Society
Nebraska Lung Association
Nebraska Chapter, American College of Surgeons
Nebraska Thoracic Society
State of Nebraska, Department of Social Services

April 24-28, 1987

Cornhusker Hotel Lincoln, Nebraska

PROGRAM INDEX

Acknowledgements.....	6
Auxiliary Officers.....	32
Auxiliary Program.....	31-35
Board of Councilors Schedule.....	7
Board of Directors Schedule.....	7
Daily Schedule.....	20-21
Floor Plan.....	38-39
Fun Night/Sportsman's Day Banquet.....	29
General Information.....	3
General Session Breakfast Programs.....	26, 29
Guest Faculty.....	30
Hospital Medical Staff.....	26
House of Delegates Schedule.....	7
Inaugural Banquet.....	27
Nominating Committee Schedule.....	7
Officer Listing.....	5
Past Presidents.....	36-37
Presidents' Reception.....	27
Professional Liability.....	28
Program.....	11-30
Social Services, Department of.....	26
Specialty Society Business Sessions.....	9
Specialty Sponsored Programs:	
Allergy.....	14
Anesthesiology.....	19
Cardiology.....	13
Dermatology.....	15
Emergency Medicine.....	25
Internal Medicine.....	17
Obstetrics & Gynecology.....	15
Ophthalmology.....	16
Organ Retrieval.....	26
Pediatrics.....	18
Perinatal Workshop.....	11-12
Plastic Surgery.....	14
Psychiatry.....	19
Sleep Disorders & Pulmonology.....	13
Surgery.....	22-24
Thoracic Medicine.....	14
Sportsman's Day Activities.....	8

SCIENTIFIC SESSIONS COMMITTEE

Sushil S. Lacy, M.D., Chairman.....	Lincoln
Donald E. Waltemath, M.D., Convention Chairman.....	Lincoln
David L. Bacon, M.D.....	Kearney
Paul J. Bender, Jr., M.D.....	Omaha
Michael A. Breiner, M.D.....	Lincoln
Mark A. Christensen, M.D.....	Omaha
Richard A. Hranac, M.D.....	Kearney
Donald J. Larson, M.D.....	Lincoln
Donna K. Nelson, M.D.....	Omaha
Richard M. Tempero, M.D.....	Omaha

NOTE: Annual session registrants are welcome at all scientific programs. Only business meetings are limited to specialty group members.

119TH ANNUAL SESSION NEBRASKA MEDICAL ASSOCIATION

PURPOSE:

To advance the science and art of medicine and to elevate the standards of medical education. Meetings of the Annual Session are devoted to the scientific work of the members, disseminating to members and others, facts and opinions relating to medical knowledge, treatment and procedures.

The Scientific Sessions Committee of the Nebraska Medical Association, as its continuing medical education mission, seeks to satisfy the educational needs and interests of participants in the Nebraska Medical Association with scientifically sponsored programs. Needs and interest are adjusted according to geographic and physician specialty requests on an annual review basis.

The overall goal of this scientific program is to substantiate or change the attitude and approach of the physician to the solution of a given medical problem, present new knowledge in a specific area, update data, and introduce new specific skills and techniques.

SPONSORSHIP:

The meeting is sponsored by the Scientific Sessions Committee of the Nebraska Medical Association in conjunction with the Nebraska Allergy Society, the Nebraska Society of Anesthesiologists, the Missouri Valley Dermatologic Society, the Nebraska Chapter of the American College of Emergency Physicians, the American Heart Association, Nebraska Affiliate, Lincoln Division, the Nebraska Society of Internal Medicine, the Nebraska Chapter of the American College of Physicians, the Nebraska Section of the American College of Obstetricians and Gynecologists, the Nebraska Academy of Ophthalmology, the Nebraska Chapter of the American Academy of Pediatrics, the Nebraska Perinatal Organization, the Nebraska Society of Plastic and Reconstructive Surgeons, the Nebraska Psychiatric Society, the Nebraska Lung Association, the Nebraska Organ Retrieval System, Inc., the Nebraska Chapter of the American College of Surgeons, the Nebraska Thoracic Society, and the State of Nebraska, Department of Social Services.

CREDIT:

This program has been reviewed and is acceptable for 20½ Prescribed hours by the American Academy of Family Physicians.

The Scientific Sessions Committee is accredited by the Nebraska Medical Association Commission on Medical Education to sponsor continuing medical education for physicians. The Scientific Sessions Committee certifies that this continuing medical education offering meets the criteria for 20½ hours of credit in Category I of the Physician's Recognition Award of the American Medical Association, or any other organization that recognizes Category I credit, provided the program is used and completed as designed.

GENERAL INFORMATION

The host facility for the Annual Session is the Cornhusker Hotel, 333 South 13th Street, Lincoln, NE 68508, (402) 474-7474.

REGISTRATION: The registration desk will be located in the Cornhusker Square Atrium. Registration begins at 7:00 a.m., Friday, April 24. Identification badges must be worn by all persons attending the session.



HIRAM R. WALKER, M.D.
President 1986-87



L. DWIGHT CHERRY, M.D.
President 1987-88

President

Hiram R. Walker, M.D., Kearney..... 1986-87
L. Dwight Cherry, M.D., Lincoln 1987-88

Secretary-Treasurer

Robert F. Shapiro, M.D., Lincoln..... 1987

Speaker, House of Delegates

Alvin A. Armstrong, M.D., Scottsbluff..... 1989

Vice-Speaker, House of Delegates

Richard H. Meissner, M.D., Omaha 1989



Board of Councilors

District	Term Expires
I. Stanley M. Truhlsen, M.D., Omaha.....	1987
II. Howard A. Dinsdale, M.D., Lincoln.....	1987
III. C. T. Frerichs, M.D., Beatrice.....	1987
IV. Roger P. Massie, M.D., Plainview.....	1987
V. William J. Chleborad, M.D., Fremont.....	1988
VI. Robert W. Herpolsheimer, M.D., Seward.....	1988
VII. Robert E. Quick, M.D., Crete.....	1988
VIII. Floyd Shiffermiller, M.D., Ainsworth.....	1988
IX. Stanley F. Nabity, M.D., Grand Island.....	1989
X. David R. Little, M.D., Hastings.....	1989
XI. Donald E. Fischer, M.D., North Platte.....	1989
XII. Donald E. Wilkinson, M.D., Alliance.....	1989

Chairman, Board of Councilors

Stanley M. Truhlsen, M.D., Omaha..... 1987



Board of Directors

Hiram R. Walker, M.D., Kearney.....	Chairman
L. Dwight Cherry, M.D., Lincoln.....	Vice-Chairman
Robert F. Shapiro, M.D., Lincoln.....	Secretary
Francis D. Donahue, M.D., Omaha.....	Past President
Donald J. Pavelka, M.D., Omaha.....	1989
Richard A. Raymond, M.D., O'Neill.....	1988
Paul E. Collicott, M.D., Lincoln.....	1987
Alvin A. Armstrong, M.D., Scottsbluff.....	Ex-Officio
Richard H. Meissner, M.D., Omaha.....	Ex-Officio
Stanley M. Truhlsen, M.D., Omaha.....	Ex-Officio



Delegates to AMA

John D. Coe, M.D., Omaha.....	1988
C. J. Cornelius, Jr., M.D., Sidney.....	1987
Blaine Y. Roffman, M.D., Omaha.....	1988
Louis J. Gogela, M.D., Lincoln.....	1987

Alternate Delegates to AMA

NMA President
NMA President-Elect
NMA Secretary-Treasurer



Editor, Nebraska Medical Journal

Alan D. Forker, M.D..... Lincoln

Executive Staff

William L. Schellpeper, Executive Director..... Lincoln
James K. Ruigh, Assistant Executive Director... Lincoln

ACKNOWLEDGEMENTS

The Nebraska Medical Association gratefully acknowledges the support of the following organizations for their contribution to the 1987 Annual Session.



ETHICON MECHANICAL PRODUCTS DIVISION

Proximate * Linear Cutter
Proximate * ReLoadable Linear Stapler
Proximate * Intraluminal Stapler
Proximate * Plus Skin Stapler

HMO NEBRASKA, INC.

A wholly-owned subsidiary of Blue Cross and Blue Shield of Nebraska. HMO Nebraska is a federally-qualified health maintenance organization.

ELI LILLY & COMPANY/DISTA PRODUCTS COMPANY

KEFLET[™] Tablets * Nalfon * Ceclor * Humulin

MEAD JOHNSON NUTRITIONAL GROUP

Enfamil * Prosobee * Poly Vi Sol-Flor * Tempra

NORWICH EATON PHARMACEUTICALS, INC.

Macrochantin * Entex * Vivonex T.E.N. * Dantrium

OLNEY FOUNDATION

ROSS LABORATORIES

Similac * Special Care * Isomil

ST. PAUL FIRE & MARINE INSURANCE COMPANY

Physicians' Professional Liability

Professional Office Package

PAK II

Personal & Commercial Umbrellas

NEBRASKA MEDICAL ASSOCIATION BUSINESS SESSIONS

Board of Directors

Sunday, April 26, 7:30 a.m., Conference Room 4

Board of Councilors

Sunday, April 26, 10:00 a.m., Room D

House of Delegates

First Session:

Sunday, April 26, 1:30 p.m., Rooms A, B, & C

RECOGNITION OF FIFTY-YEAR PRACTITIONERS

John A. Aita, M.D., Omaha
Willard C. Brinegar, M.D., Norfolk
Alister I. Finlayson, M.D., Omaha
Maurice D. Frazer, M.D., Lincoln
Richard W. Gray, M.D., Lincoln
Joe T. Hanna, M.D., Scottsbluff
Charles G. Ingham, M.D., Wayne
Letteer G. H. Lewis, M.D., LaPorte, Minnesota
Joseph A. Longo, Sr., M.D., Omaha
Paul D. Marx, M.D., Lincoln
Harry H. McCarthy, M.D., Omaha
Ralph C. Moore, M.D., Omaha
Harold J. Panzer, M.D., Ainsworth
Samuel T. Thierstein, M.D., Lincoln
John Martin Thomas, M.D., Glenwood, Iowa

Reference Committees, 2:30 p.m.

Second Session:

Tuesday, April 28, 9:00 a.m., Rooms A, B, & C
Presentation of AMA Education and
Research Foundation Checks
Presentation of Nebraska Medical
Foundation Student Research
Scholarship Checks

Third Session:

Tuesday, April 28, Rooms A, B, & C
(will immediately follow Second Session)

Nominating Committee

First Session:

Sunday, April 26, 5:00 p.m., Conference Rooms 5 & 6

Second Session:

Monday, April 27, 9:00 a.m., Room A

Honors Luncheon

Past Presidents and 50-Year Practitioner Luncheon
Sunday, April 26, 11:30 a.m., Room E

PROGRAM

MONDAY, APRIL 27

Sportsman's Day

- 12:30 p.m. **GOLF TOURNAMENT**
Hillcrest Country Club
8901 O Street
(Shotgun Tee Off)
(Participation by preregistration only)
Sandwich Buffet Lunch 11:00 a.m. to 12:30 p.m.
Donald E. Waltemath, M.D., Chairman
Donald A. Dynek, M.D., Vice Chairman
- 12:30 p.m. **TENNIS TOURNAMENT**
Lincoln Racquet Club
5300 Old Cheney Road
(Participation by preregistration only)
William T. Griffin, M.D., Chairman
- 12:30 p.m. **RACQUETBALL TOURNAMENT**
Prairie Life Center
1305 South 70th Street
(Lunch included)
(Participation by preregistration only)
Roderick E. Harley, M.D., Chairman
- 2:00 p.m. **NMA 10K RUN**
Recreation Center, Lincoln Air Park West
4000 N.W. 46th
(Participation by preregistration only)
Irving E. Weston, M.D., Chairman
- 6:30 p.m. **FUN NIGHT/SPORTSMAN'S DAY SOCIAL HOUR**
Cornhusker Hotel - Rooms D & E
- 7:30 p.m. **FUN NIGHT/SPORTSMAN'S DAY BANQUET**
Cornhusker Hotel - Rooms A, B, & C

SPECIALTY SOCIETY BUSINESS SESSIONS

Nebraska Society of Internal Medicine

Saturday, April 25, 1:45 p.m., Conference Room 9

Nebraska Chapter, American College of Physicians

Saturday, April 25, 11:15 a.m., Conference Room 9

Nebraska Section, American College of Obstetricians & Gynecologists

Saturday, April 25, 10:00 a.m., Conference Room 7

Nebraska Academy of Ophthalmology

Saturday, April 25, 4:00 p.m., Room E

Nebraska Chapter, American Academy of Pediatrics

Saturday, April 25, 4:00 p.m., Room D

Nebraska Perinatal Organization

Friday, April 24, 4:40 p.m., Rooms A, B, & C

Nebraska Society of Plastic & Reconstructive Surgeons

Saturday, April 25, 10:00 a.m., Room 418

Nebraska Chapter, American College of Surgeons

Saturday, April 25, 5:00 p.m., Room F

Nebraska Thoracic Society

Saturday, April 25, 12:00 noon, Room A

FRIDAY, APRIL 24

- 7:00 a.m. **Perinatal Workshop**
to Rooms A, B, & C
6:00 p.m.
Sponsored by —
Nebraska Perinatal Organization and the Nurses Association of the American College of Obstetricians & Gynecologists
- 7:00 **Registration**
- 7:45 **Welcome**
Y. George Miyazaki, M.D., Omaha
Sheila Ecklund, R.N., Lincoln
- 8:00 **Community Hospital Perinatal Needs**
N. Leon Books, M.D., Broken Bow
Joan Foster, R.N., Broken Bow
- 8:50 **Neonatal Issues Panel - ECMO, AIDS, Surfactant Replacement**
Moderator — Robert M. Nelson, Jr., M.D., Omaha
Lawrence C. Bausch, M.D., Lincoln
Larry D. Eggert, M.D., Omaha
John J. Esslinger, M.D., Omaha
Paul D. Goodrich, M.D., Omaha
Kenton L. Shaffer, M.D., Kearney
- 9:40 **Break** — Compliments of Mead-Johnson Laboratories
- Workshops (Choice of One)**
- 10:10 Session A — Rooms A, B, & C
Full-Term, Pre-Term Infant Stimulation
Phyl Kenney, R.N., Lincoln
Session B — Room D
Genetics and Genetic Counseling
Rebecca Anderson, J.D., Omaha
Session C — Conference Rooms 2 & 3
M.D. Only (A Continuation of Neonatal Issues in Technical Terms)
Robert M. Nelson, Jr., M.D., Omaha
Session D — Conference Room 4
Formula Use In The Healthy Infant
Steven H. Erdman, M.D., Omaha
- Workshops (Choice of One)**
- 11:10 Session A — Rooms A, B, & C
Neonatal Infection Update
Lori Snyder, R.N., Lincoln
Session B — Room D
Fetal Heart Rate Monitoring - An Update of the Basics
Ruth Youngberg, R.N., Lincoln
Session C — Conference Rooms 2 & 3
Incidence of Respiratory Syncytial Virus and the Need for Re-Hospitalization
Mark J. Domet, M.D., Lincoln

PROGRAM

FRIDAY, APRIL 24

Session D — Conference Room 4

Feeding the Low Birth Weight Infant
Michael H. Hart, M.D., Omaha

12:00 **Lunch** — Center Hall

Ethics and Civil Rights
The Honorable Norman Krivosha
Chief Justice, Nebraska Supreme Court,
Lincoln

1:30 **Perinatal Issues Panel - Prevention of
Pre-Term Labor, Viability**

Moderator — Bruce E. Taylor, M.D., Lincoln

Washington C. Hill, M.D., Omaha
Michael G. Levine, M.D., Omaha
William F. Rayburn, M.D., Omaha

Workshops
(Choice of One)

2:30 Session A — Rooms A, B, & C

**Developmental Outcomes of Children in
the Hospital Identified as Handicapped**
Cordelia Robinson, Ph.D., R.N., Omaha

Session B — Room D

The Pregnant Diabetic
Barbara Fuchs, R.N., Omaha

Session C — Conference Rooms 2 & 3

Bronchopulmonary Dysplasia at Home
Ken Draper, R.R.T., Lincoln

Session D — Conference Room 4

**Medicaid Coverage of Neonatal Intensive
Care Services**
Christine M. Wright, M.D., Lincoln
Laura Rigg, R.N., Lincoln

3:20 **Break** — Compliments of Wyeth Laboratories

Workshops
(Choice of One)

3:50 Session A — Rooms A, B, & C

Inborn Errors of Metabolism
Hobart E. Wiltse, M.D., Omaha

Session B — Room D

Current Issues in Teratogenesis
Ann Haskins Olney, M.D., Omaha

4:40 **Business Meeting of the Nebraska
Perinatal Organization**
Y. George Miyazaki, M.D., President

4:40 **Wine & Cheese Party** — Conference Rooms
2, 3, & 4
(Perinatal Conference Registrants Only)
Compliments of Ross Laboratories

The Seventh Annual Nebraska Perinatal Workshop Program has been designed to update health care professionals in regard to mother and newborn.

PROGRAM

FRIDAY MORNING, APRIL 24

10:00 a.m. **Sleep Disorders & Pulmonology**
to Rooms E & F

12:00 noon Sponsored by —
**Nebraska Lung Association & The
Lancaster County Medical Society**

**Modern Cardio-Pulmonary Sleep Studies
Indications and Treatment**

10:00 **Sleep Apnea - Who, What, and Why**
Timothy R. Lieske, M.D., Lincoln

10:45 **Question & Answer Period**

11:00 **Evaluation and Treatment Options**
Christian Guilleminault, M.D., Stanford,
California

11:45 **Question & Answer Period**

Obstructive sleep apnea is a recently recognized major health threat affecting an estimated 10 to 30 million individuals of varying ages and to varying degrees. This course is designed to familiarize the clinician with the symptoms, risk groups, potential complications, and long term effects of these disorders. This program will also describe present methods of evaluation and outline current treatment options.

FRIDAY AFTERNOON, APRIL 24

1:00 p.m. **Cardiology**
to Rooms E & F
5:00 p.m. Sponsored by —
**American Heart Association, Nebraska
Affiliate, Lincoln Division**

Program Chairman & Moderator —
Sabyasachi Mahapatra, M.D., Lincoln

**Cardiac Update: Heart Transplantation
and Acute Intervention in MI**

1:00 **Heart Transplantation: Patient Selection,
Patient Transportation, Post Care**
Timothy Icenogle, M.D., Tucson, Arizona

2:00 **Pre-And-Post Operative Care**
Timothy Icenogle, M.D., Tucson, Arizona
Annie Nicholson, R.N., Tucson, Arizona

3:00 **Acute Intervention: An Update on Angio-
plasty and Streptokinase**
Mark D. McGaughey, M.D., Baltimore, Maryland
Liberato A. Iannone, M.D., Des Moines, Iowa

This course is designed to update the primary care physician's knowledge of the current state of the art of heart transplantation; selection of patients and patient transportation; and pre-and-post operative care of the heart transplant patient. An update on angioplasty and streptokinase will conclude the session.

PROGRAM

SATURDAY MORNING, APRIL 25

- 8:00 a.m. **Allergy**
to Room B
10:00 a.m. Sponsored by —
Nebraska Allergy Society
- Program Chairman & Moderator —
Melvin Hoffman, M.D., Lincoln
- 8:00 **Chronic EB Virus Infection and Allergy**
James Jones, M.D., Denver, Colorado

This course will cover the topic of chronic EB Virus infection, the signs and symptoms, laboratory evaluation and its relationship to the area of allergy syndromes.

*Appreciation is expressed to Glaxo, Inc. for their contribution.

-
- 10:00 a.m. **Thoracic Medicine**
to Room B
1:30 p.m. Sponsored by —
Nebraska Thoracic Society
- Program Chairman & Moderator —
Thomas C. Tinstman, M.D., Omaha
- 10:00 **Grain Dust and Agricultural Problems**
Austin B. Thompson, M.D., Omaha
- 11:00 **Transtacheal Oxygen Therapy**
Louis W. Burgher, M.D., Omaha
- 12:00 **Luncheon & Annual Business Meeting —**
Room A
Presiding — Thomas C. Tinstman, M.D.,
Omaha, President

-
- 10:00 a.m. **Plastic & Reconstructive Surgery**
to Room 418
11:30 a.m. Sponsored by —
Nebraska Society of Plastic & Reconstructive Surgeons
- Program Chairman —
Philip S. Metz, M.D., Lincoln
- 10:00 **Business Meeting**
Presiding — Philip S. Metz, M.D., President,
Lincoln

S
A
T
U
R
D
A
Y

PROGRAM

SATURDAY MORNING, APRIL 25

- 9:00 a.m. **Dermatology**
to Room C
11:00 a.m. Sponsored by —
Missouri Valley Dermatologic Society
- Program Chairman & Moderator —
Christopher P. Crotty, M.D., Omaha
- Dermatology Update 1987**
- 9:00 **Panel Discussion: Clues to Dermatologic Diagnosis and Therapy**
Rodney S. W. Basler, M.D., Lincoln
Ann E. Lott, M.D., Lincoln
Elliott L. Rustad, M.D., Lincoln
Margaret K. Sutton, M.D., Lincoln
- Moderator — Stephen C. Papenfuss, M.D.,
Omaha
- 10:00 **Panel Discussion: New Advances in Dermatologic Surgery**
David A. Bigler, M.D., Lincoln
John R. Luckasen, M.D., Omaha
Rudolf Strnot, Jr., M.D., Lincoln

The objective of this course is to present an update on dermatologic diagnostic and treatment techniques.

-
- 10:00 a.m. **Obstetrics & Gynecology**
to Conference Room 7
1:00 p.m. Sponsored by —
Nebraska Section, American College of Obstetricians & Gynecologists
- 10:00 **Annual Business Meeting**
Presiding — Larry E. Roffman, M.D., Section
Chairman, Omaha
- 11:30 **Break**
- 12:00 **Luncheon —** Conference Room 1

S
A
T
U
R
D
A
Y

PROGRAM

SATURDAY, APRIL 25

- 8:30 a.m. **Ophthalmology**
to Room E
5:00 p.m. Sponsored by —
Nebraska Academy of Ophthalmology
Program Chairman —
D. Francis Arkfeld, M.D., Omaha
- 8:30 a.m. **Eye Care For Primary Care Physicians**
to Presented by Nebraska Academy of
11:30 a.m. Ophthalmology Members
- 8:30 **Welcome & Announcements**
- 8:35 **Diabetic Eye Disease**
D. Francis Arkfeld, M.D., Omaha
- 9:20 **Break**
- 9:30 **Eye Care Screening Skills - Part I**
(Video Presentation)
- 10:00 **Break**
- 10:05 **The Aging Eye**
Max W. Linder, M.D., Lincoln
- 10:50 **Break**
- 11:00 **Eye Care Screening Skills - Part II**
(Workshop)
- 12:00 **Luncheon — Room E**
Held in conjunction with the National Society
to Prevent Blindness, Nebraska Affiliate
Moderator — Mylan R. VanNewkirk, M.D.,
Scottsbluff
- The History of Retinal Reattachment
Surgery**
Ronald G. Michels, M.D., Baltimore,
Maryland
- 2:00 **General Session**
- Cellular Biology in Proliferative
Vitreoretinopathy**
Ronald G. Michels, M.D., Baltimore,
Maryland
- 2:45 **Break**
- 3:00 **Clinical Correlations**
Ronald G. Michels, M.D., Baltimore,
Maryland
- 4:00 **Business Meeting**
Presiding — Mylan R. VanNewkirk, M.D.,
President, Scottsbluff

The morning presentations will be directed toward the primary care physician to discuss common problems with respect to the geriatric patient and the diabetic patient.

PROGRAM

SATURDAY, APRIL 25

- 8:00 a.m. **Internal Medicine**
to Conference Room 9
5:30 p.m. Sponsored by —
**Nebraska Society of Internal Medicine/
Nebraska Chapter, American College of
Physicians**
Program Chairmen —
J. A. Grubbe, M.D., Lincoln
Scot C. Sorensen, M.D., Lincoln
- Combined Annual State Meetings**
- 8:00 **Registration**
- 8:30 **Panel Discussion: Obesity: Definition,
Health Risk and Treatment**
Can Dieting Make You Fat?
Linda Hester, R.D., Omaha
I Eat Like A Bird
Timothy O. Wahl, M.D., Omaha
Bubble or Bust
Edwin C. Schafer, M.D., Omaha
Surgery, The Only Way
John L. Reed, M.D., Lincoln
- 10:15 **Break**
- 10:30 **Cancer Screening in Inflammatory
Bowel Disease**
Richard G. Farmer, M.D., Cleveland, Ohio
- 11:00 **Clinical Vignette - Legionnaire's Disease
As A Cavitory Lung Lesion**
Michael H. Peters, M.D., UNMC Internal
Medicine Resident
- 11:15 **Nebraska Chapter, American College of
Physicians Business Meeting**
Presiding — F. F. Paustian, M.D., Chapter
Chairman, Omaha
The Washington Scene
Debra M. Prout, Washington, D.C.
- 12:00 **Luncheon — Conference Room 8**
- 12:15 **ASIM & Physician Payments in the 80s**
Eugene Ograd, M.D., Sacramento, California
- 1:15 **Activities Update of the ACP**
Richard G. Farmer, M.D., Cleveland, Ohio
- 1:45 **Nebraska Society of Internal Medicine
Business Meeting**
Presiding — Vernon F. Garwood, M.D.,
President, Lincoln
- 2:15 **Clinical Vignette - Solitary Nonfunctioning
Thyroid Nodule**
Thomas V. Neuman, M.D., Creighton University
School of Medicine Internal Medicine Resident
Moderator — Vernon F. Garwood, M.D., Lincoln
- 2:30 **IPAs: Are THEY The Panacea?**
The Advantage to the Physician and Patient
John R. Mitchell, M.D., Omaha
The Attorney's Viewpoint
Larry V. Albers, Esq., Lincoln
Is There A Life AFTER IPAs?
Eugene Ograd, M.D., Sacramento, California
- 3:45 **Break**
- 4:00 **Panel - Questions and Answers**
- 5:30 **Cocktail Party — Conference Room 8**
NSIM/ACP Members

S
A
T
U
R
D
A
Y

PROGRAM

SATURDAY, APRIL 25

- 8:30 a.m. **Pediatrics**
to Room D
5:00 p.m. Sponsored by —
Nebraska Chapter, American Academy of Pediatrics
Program Chairman —
Tom F. Tonniges, M.D., Hastings
- 8:30 **Registration**
Medical Aspects of Child & Sexual Abuse
Moderator — Michael J. Germer, M.D., Lincoln
- 9:00 **Where We Have Been - Historical Perspectives**
Robert ten Bensel, M.D., Minneapolis, MN
- 9:30 **Radiological Diagnosis of Child Abuse**
Michael D. Wilmot, M.D., Omaha
- 10:00 **Physical Diagnosis of Sexual Child Abuse**
Robert ten Bensel, M.D., Minneapolis, MN
- 10:30 **Break**
- 10:45 **Three Interesting Cases - The Subspecialist's Role**
Mark Horton, M.D., Omaha
Moderator — Larry A. Latson, M.D., Omaha
- 11:15 **Student Research Papers**
Creighton University School of Medicine
University of Nebraska College of Medicine
- 12:15 **Luncheon For Nebraska Chapter Members**
- 1:00 **Long-Term Studies - Has Diagnosis Made a Difference?**
Robert ten Bensel, M.D., Minneapolis, MN
Psycho-Social and Legal Aspects of Child Abuse
Moderator — Mark Horton, M.D., Omaha
- 1:30 **Prevention Programs - Role of the Pediatrician**
John W. Walburn, M.D., Omaha
- 2:00 **Panel Discussion: Case of the Continued Case**
to
- 3:30 **To Report or Not to Report? Are We Protected By The Law?**
- 3:30 **Where Are We Headed?**
Robert ten Bensel, M.D., Minneapolis, MN
- 4:00 **Nebraska Chapter, American Academy of Pediatrics Business Meeting**
Presiding — H. J. Kuehn, M.D., Chapter Chairman, Omaha

The Nebraska Chapter of Pediatrics' course will be a comprehensive course in the approach to the physically and sexually abused child and adolescent.

*Appreciation is expressed to the Boys' Town Institute and the Department of Social Services of the State of Nebraska for their contribution.

PROGRAM

SATURDAY AFTERNOON, APRIL 25

- 1:00 p.m. **Anesthesiology**
to Room C
5:00 p.m. Sponsored by —
Nebraska Society of Anesthesiologists
Program Chairman and Moderator —
K. Reed Peters, M.D., Omaha
- 1:00 **Grass Roots Political Education Seminar**
Michael E. Dunn, Washington, D.C.
(There will be a 15 minute break at 3:00 p.m.)

This course is designed to increase the political effectiveness of an individual physician and groups of physicians at both the state and federal level.

*The Nebraska Society of Anesthesiologists would like to thank the American Society of Anesthesiologists for generously supporting Mr. Dunn's visit to the Nebraska Medical Association's Annual Session.

- 1:00 p.m. **Psychiatry**
to Room B
5:00 p.m. Sponsored by —
Nebraska Psychiatric Society
Program Chairman — David L. Sudduth, M.D., Omaha
- Fine Tuning The Couch**
- 1:00 **Managing the Atypical Patient**
Robert G. Osborne, M.D., Lincoln
- 2:00 **Recent Advances in Neuro-Psych Assessment**
James Cole, Ph.D., Lincoln
- 3:00 **Using the Computer in your Psychiatric Practice**
Douglass A. Decker, Jr., M.D., Lincoln
- 4:00 **Panel Discussion - Question & Answer Period**
James Cole, Ph.D., Lincoln
Douglass A. Decker, Jr., M.D., Lincoln
Robert G. Osborne, M.D., Lincoln

This course will present suggestions for managing the atypical patient, as well as recent advances in psychological assessment including new developments in neuropsych. testing, restandardization of the M.M.P.I., and restructuring of Rorschach testing. It will also discuss applications of the computer to treatment of the psychiatric patient.

S
A
T
U
R
D
A
Y

S
A
T
U
R
D
A
Y

DAILY SCHEDULE

FRIDAY, APRIL 24

GENERAL REGISTRATION: 7:00 a.m., Cornhusker Square Atrium

Cardiology

Scientific Program 1:00 p.m. - 5:00 p.m., Rooms E & F

Perinatal Workshop

Scientific Program, 8:00 a.m. - 4:40 p.m., Rooms A, B, & C

Luncheon, 12:00 noon, Center Hall

Business Meeting, 4:40 p.m., Rooms A, B, & C

Nebraska Perinatal Organization Wine & Cheese Party, 4:40 p.m.,
Conference Rooms 2, 3, & 4

Sleep Disorders & Pulmonology

Scientific Program 10:00 a.m. - 12:00 noon, Rooms E & F



SATURDAY, APRIL 25

GENERAL REGISTRATION: 7:00 a.m., Cornhusker Square Atrium

Allergy

Scientific Program, 8:00 a.m. - 10:00 a.m., Room B

Anesthesiology

Scientific Program, 1:00 p.m. - 5:00 p.m., Room C

Dermatology

Scientific Program, 9:00 a.m. - 11:00 a.m., Room C

Emergency Medicine

Scientific Program, 1:30 p.m. - 3:30 p.m., Conference Room 7

Internal Medicine

Scientific Program, 8:30 a.m. - 5:30 p.m., Conference Room 9

Business Meeting, Nebraska Chapter, American College of

Physicians, 11:15 a.m., Conference Room 9

Luncheon, 12:00 noon, Conference Room 8

Business Meeting, Nebraska Society of Internal Medicine, 1:45 p.m.

Conference Room 9

Social Hour, 5:30 p.m., Conference Room 8

Obstetrics & Gynecology

Business Meeting, Nebraska Section, American College of

Obstetricians & Gynecologists, 10:00 a.m. - 11:30 a.m.,

Conference Room 7

Luncheon, 12:00 noon, Conference Room 1

Ophthalmology

Scientific Program, 8:30 a.m. - 11:30 a.m., Room E

Luncheon, Nebraska Academy of Ophthalmology with the National

Society to Prevent Blindness, Nebraska Affiliate, 12:00 noon,

Room E

Scientific Program, 2:00 p.m. - 4:00 p.m., Room E

Business Meeting, Nebraska Academy of Ophthalmology, 4:00 p.m.,

Room E

Pediatrics

Scientific Program, 9:00 a.m. - 4:00 p.m., Room D

Luncheon for Chapter Members, Nebraska Chapter, American

College of Pediatrics, 12:15 p.m., Room D

Business Meeting, Nebraska Chapter, American Academy of

Pediatrics, 4:00 p.m., Room D

Plastic & Reconstructive Surgery

Business Meeting, Nebraska Society of Plastic & Reconstructive

Surgeons, 10:00 a.m. - 11:30 a.m., Room 418

Psychiatry

Scientific Program, 1:00 p.m. - 5:00 p.m., Room B

Surgery

Scientific Program, 10:00 a.m. - 5:00 p.m., Room F

Luncheon, Nebraska Chapter, American College of Surgeons, 12:00

noon, Conference Rooms 2 & 3

Business Meeting, Nebraska Chapter, American College of Sur-

geons, 5:00 p.m., Room F

Thoracic Medicine

Scientific Program, 10:00 a.m. - 12:00 noon, Room B

Luncheon and Business Meeting, Nebraska Thoracic Society, 12:00
noon, Room A

Alumni Meeting

University of Nebraska College of Medicine Annual Alumni Meeting,

4:30 p.m., Conference Rooms 2 & 3

Reception Honoring New Honorary Members, 5:30 p.m., Conference
Room 4



SUNDAY, APRIL 26

GENERAL REGISTRATION: 7:00 a.m., Cornhusker Square Atrium

General Session

NMA/NSIM Breakfast Program, 8:00 a.m. - 9:00 a.m., Rooms E & F

Honors Luncheon

50-Year Practitioners and NMA Past Presidents' Luncheon, 11:30
a.m., Room E

Hospital Medical Staff

General Session, 9:00 a.m. - 11:15 a.m., Rooms A, B, & C

NMA Business Sessions

Board of Directors, 7:30 a.m., Conference Room 4

Board of Councilors, 10:00 a.m., Room D

House of Delegates, 1:30 p.m., Rooms A, B, & C

Nominating Committee, 5:00 p.m., Conference Rooms 5 & 6

Organ Retrieval

Scientific Program, 11:15 a.m. - 12:00 noon, Rooms A, B, & C

Department of Social Services

Luncheon, 12:00 noon, Conference Room 9

SUNDAY EVENING

Presidents' Reception for Physicians and Spouses, 6:00 p.m.,
Rooms A, B, & C

Inaugural Banquet for Physicians and Spouses, 7:00 p.m., Rooms
D, E, & F



MONDAY, APRIL 27

Professional Liability

General Session, 8:00 a.m. - 11:00 a.m., Conference Room 9

NMA Business Sessions

Nominating Committee, 9:00 a.m., Room A

Sportsman's Day

Sportsman's Day Sandwich Buffet, 11:00 a.m., Hillcrest Country Club

Golf Tournament, 12:30 p.m., Hillcrest Country Club

Tennis Tournament, 12:30 p.m., Lincoln Racquet Club

Racquetball Tournament, 12:30 p.m., Prairie Life Center

NMA 10K Run, 2:00 p.m., Recreation Center, Lincoln Air Park West

MONDAY EVENING

Fun Night/Sportsman's Day Cocktails, 6:30 p.m., Rooms D & E

Fun Night/Sportsman's Day Banquet, 7:30 p.m., Rooms A, B, & C



TUESDAY, APRIL 28

General Session

Breakfast Program, 8:00 a.m. - 9:00 a.m., Conference Rooms
2, 3, & 4

House of Delegates, 9:00 a.m., Rooms A, B, & C

PROGRAM

SATURDAY, APRIL 25

- 10:00 a.m. **Surgery**
to Room F
5:00 p.m. Sponsored by —
Nebraska Chapter, American College of Surgeons
- Program Chairman —
Jon S. Thompson, M.D., Omaha
- 10:00 **The Efficacy of ASA Classification of Surgical and Anesthesia Related Complications**
Thomas Heffron, M.D., Omaha
Denitsu Hirai, M.D., Lincoln
- 10:12 **Central Tendon Defects: A Cause of Anterior Diaphragmatic Hernia**
Garnet J. Davis, M.D., Omaha
Earl Hodin, M.D., Omaha
Lewis W. Pinch, M.D., Omaha
- 10:24 **Methods of Biliary Reconstruction in Liver Transplantation**
Ronald Hollins, M.D., Omaha
Byers W. Shaw, Jr., M.D., Omaha
- 10:36 **Roux-en "Y" Gastric Bypass: An Emphasis on Technique**
J. A. Saporta, Sr., M.D., Omaha
M. Cegielski, M.D., F.A.C.S., Omaha
- 10:48 **Surgical Treatment of Pancreatitis Associated With Pancreas Divisum**
L. E. Bragg, M.D., Omaha
J. S. Thompson, M.D., Omaha
D. A. Burnett, M.D., Omaha
- 11:00 **Parathyroid Glands Surgery in Patients with End Stage Renal Disease**
C. M. Zielinski, M.D., Omaha
M. Albertucci, M.D., Omaha
T. Heffron, M.D., Omaha
M. Rothberg, M.D., Omaha
R. Klingman, M.D., Omaha
S. Lindley, M.D., Omaha
J. F. Ronk, B.A., M.S., Omaha
M. Nielsen, R.N., Omaha
- 11:12 **Surgical Management of Peptic Ulcer Disease**
Jon S. Thompson, M.D., Omaha
Layton F. Rikkers, M.D., Bellevue
- 11:24 **Videoendoscopy: The New Frontier**
Gbaranen B. M. Gbaanador, M.D., Omaha
Denitsu Hirai, M.D., Lincoln
- 11:36 **Effect of Extra-Renal Transplantation Upon Organ Recovery**
R. Patrick Wood, M.D., Omaha
Byers W. Shaw, M.D., Omaha
Layton F. Rikkers, M.D., Bellevue
Nebraska Organ Retrieval System, Inc., Omaha
- 11:48 **Intestinal Resection in Adults - Causes and Consequences**
Garnet J. Davis, M.D., Omaha
Jon S. Thompson, M.D., Omaha
Layton F. Rikkers, M.D., Bellevue

SATURDAY

PROGRAM

SATURDAY, APRIL 25

- 12:00 **Lunch** — Conference Rooms 2 & 3
- 1:00 **Milestones in History of Surgery and Medicine in Nebraska**
Martin L. Rothberg, M.D., Omaha
Gregory V. Stanislav, M.D., Omaha
- 1:12 **Streptokinase as the Initial Treatment for Deep Venous Thrombosis and Pulmonary Embolism**
E. A. Waltke, M.D., Omaha
J. W. Smith, M.D., Omaha
- 1:24 **Surgical Considerations in the Placement of CAPD Catheters**
R. J. Windle, M.D., Lincoln
- 1:36 **Emergent Coronary Artery Bypass - Worse Case Scenerio**
Keith E. Brandt, M.D., Omaha
Robert D. Lynch, M.D., Omaha
Steven L. Clinch, M.D., Omaha
- 1:48 **Duplex Ultrasound as a Noninvasive Technique of Assessing Portal Hemodynamics**
C. F. Osaki, M.D., Omaha
L. F. Rikkers, M.D., Omaha
J. C. Anderson, M.D., Omaha
- 2:00 **Late Displacement of Broviac Catheter Tip**
Denitsu Hirai, M.D., F.A.C.S., Lincoln
Robert R. Klingman, Jr., M.D., Omaha
Lynne Duren Barkmeier, M.D., Omaha
- 2:12 **Retroperitoneal Resection of Abdominal Aortic Aneurysms: A Cost Effective Approach**
John W. Smith, M.D., Omaha
E. A. Waltke, M.D., Omaha
- 2:24 **Extracorporeal Renal Surgery and Auto-transplantation in a Solitary Kidney With Renal Cell Carcinoma**
Peter Howe, M.D., Omaha
Rodney Taylor, M.D., Omaha
Edward Malashock, M.D., Omaha
- 2:36 **Recent Experience In Kidney Transplantation at Bishop Clarkson Memorial Hospital**
Byers W. Shaw, M.D., Omaha
R. Patrick Wood, M.D., Omaha
Jerry L. Fischer, M.D., Omaha
Thomas F. Knight, M.D., Omaha
Frederick Ware, M.D., Omaha
- 2:48 **Break**

SATURDAY

PROGRAM

SATURDAY, APRIL 25

- S**
A
T
U
R
D
A
Y
- 3:00 **Surgery (cont.)**
Early Results of the Treatment of Urinary Incontinence Using the Artificial Urinary Sphincter
James F. France, M.D., Omaha
Francis F. Bartone, M.D., Omaha
Gernon A. Longo, M.D., Omaha
Euclid R. J. De Souza, M.D., Omaha
- 3:12 **Neoplasia in Acquired Renal Cystic Disease Patients Undergoing Chronic Ambulatory Peritoneal Dialysis**
Arnaldo F. Trabucco, M.D., Omaha
Stephen A. Bozek, M.D., Omaha
Soney L. Johansson, M.D., Omaha
J. D. Egan, M.D., Omaha
Edward Adickes, D.O., Omaha
Rodney J. Taylor, M.D., Omaha
- 3:24 **The Open Rhinoplasty Approach to Nasal Surgery**
Steven M. Denenberg, M.D., Omaha
- 3:36 **Primary Tracheoesophageal Fistula and Cricopharyngeal Myotomy for Creation of Post Laryngectomy Prosthetic Aided Speech**
Gary F. Moore, M.D., F.A.C.S., Omaha
Jane M. Emanuel, M.D., Omaha
Dwight Jones, M.D., Omaha
Anthony J. Yonkers, M.D., F.A.C.S., Bellevue
- 3:48 **Chest Wall Reconstruction**
J. J. Heieck, M.D., Omaha
C. H. Dahl, M.D., Omaha
M. Ed Baccari, M.D., Omaha
J. J. Edney, M.D., Omaha
- 4:00 **Radiographic Preoperative Diagnosis of Facial Orbital and Tripod Traumatic Fractures**
G. M. Salerno, M.D., Omaha
I. Franze, M.D., Omaha
B. V. Stromberg, M.D., Omaha
J. N. Bleicher, M.D., Omaha
- 4:12 **Long Term Loss of Effect of Myopic Epikeratophakia**
W. R. Schlictemeier, M.D., Omaha
Kay Arbegast, B.S., Omaha
- 4:24 **Brachytherapy of Brain Tumors**
Lyal G. Leibrock, M.D., Omaha
F. Miles Skultety, M.D., Omaha
Pradeep Kumar, M.D., Omaha
Roger Good, M.D., Omaha
- 4:36 **Management of Subarachnoid Hemorrhage**
Benjamin R. Gelber, M.D., Lincoln
- 5:00 **Business Meeting**

PROGRAM

SATURDAY AFTERNOON, APRIL 25

- 1:30 p.m. **Emergency Medicine**
to Conference Room 7
3:30 p.m. Sponsored by —
Nebraska Chapter, American College of Emergency Physicians

Program Chairman & Moderator —
Steven A. Schwid, M.D., Omaha
- 1:30 **Legal Hazards in Emergency Medicine**
Marshall B. Segal, M.D., J.D., Chicago, Illinois

This program will emphasize important legal issues in emergency medicine centering on various forms of consent, treating patients who are mentally ill, intoxicated, combative, etc., emphasizing the physician's duty in emergency care. The program will also include discussion on the patient's right to treatment.

SATURDAY, APRIL 25

- 4:30 **University of Nebraska College of Medicine Annual Alumni Meeting**
Conference Rooms 2 & 3
- 5:30 **University of Nebraska College of Medicine Alumni Reception Honoring New Honorary Members**
Conference Room 4

S
A
T
U
R
D
A
Y

PROGRAM

SUNDAY MORNING, APRIL 26

8:00 a.m. **GENERAL SESSION**
to Rooms E & F
9:00 a.m. Sponsored by —
**Nebraska Medical Association and the
Nebraska Society of Internal Medicine**
Presiding — Vernon F. Garwood, M.D., Lincoln
**Physician Reimbursement Prospects
for 1987**
Eugene Ograd, M.D., Sacramento, California

9:00 a.m. **GENERAL SESSION**
to Rooms A, B, & C
11:15 a.m. Sponsored by —
**Nebraska Medical Association Commis-
sion on Hospital Medical Staff**
Presiding — Steven A. Schwid, M.D., Omaha
9:00 **The Current Legal and Ethical Status of
Medical Joint Ventures**
Steven R. Hirschtick, Esq., Los Angeles,
California
9:45 **Questions**
10:00 **Break**
10:15 **Should Your Medical Staff Have Its Own
Attorney?**
Steven R. Hirschtick, Esq., Los Angeles,
California
11:00 **Questions**

11:15 a.m. **Organ Retrieval**
to Rooms A, B, & C
12:00 noon Sponsored by —
Nebraska Organ Retrieval System, Inc.
Program Chairman —
Herbert E. Reese, M.D., Lincoln
11:00 **Status Report: Organ Recovery in Nebraska**
Robert M. Duckworth, B.S., Omaha
11:45 **Questions & Answers**

This course will present a brief update related to the status of organ and tissue recovery within the State of Nebraska. Influences of in-state multiple organ transplantation, and both local and national legislation addressing pertinent issues will be explored.

12:00 noon **Department of Social Services Luncheon**
to Conference Room 9
1:30 p.m. Sponsored by —
**State of Nebraska, Department of Social
Services**
Medicaid Changes That Will Affect You
Chris Wright, M.D., Medical Director
Laura Rigg, R.N., Program Specialist

PROGRAM

SUNDAY, APRIL 26

6:00 p.m. **Presidents' Reception —**
For Physicians and their Spouses
Rooms A, B, & C
Honoring the President of the Nebraska
Medical Association and the President
of the Nebraska Medical Association
Auxiliary
7:00 p.m. **Inaugural Banquet —**
All Physicians and Spouses are cordially
invited to attend the inauguration of
L. Dwight Cherry, M.D.
Rooms D, E, & F
Presiding — Charles L. Barton, M.D.
President, Lancaster County Medical
Society
Installation of L. Dwight Cherry, M.D.



L. Dwight Cherry, M.D.

Paranormal Mysteries: Fact or Fiction?
Robert W. McCoy, Golden Valley, Minnesota

A delightful review of the pseudo-science which once captivated Paris. Enjoy his display of a phrenology machine used in Nebraska in the early 1930's.

S
U
N
D
A
Y

S
U
N
D
A
Y

PROGRAM

MONDAY MORNING, APRIL 27

8:00 a.m. **Professional Liability**
to Conference Room 9
11:00 a.m. Sponsored by —
**Nebraska Medical Association Ad-Hoc
Committee on Professional Liability**

Program Chairman and Moderator —
Warren G. Bosley, M.D., Grand Island

The Expert Witness

8:00 **The Plaintiff and the Expert Witness**
E. Terry Sibbernsen, Esq., Omaha
8:30 **Questions & Answers**
8:45 **The Defendant and the Expert Witness**
Fredric H. Kauffman, Esq., Lincoln
9:15 **Questions & Answers**
9:45 **Mock Deposition**

PROGRAM

MONDAY, APRIL 27

FUN NIGHT/SPORTSMAN'S DAY BANQUET

In Honor of Kenneth E. Neff

6:30 p.m. **Cocktails**
Rooms D & E
7:30 p.m. **Fun Night/Sportsman's Day Banquet**
Rooms A, B, & C



Kenneth E. Neff

This banquet is held in honor of Kenneth E. Neff, longstanding and dedicated Executive Director of the Nebraska Medical Association.

Entertainment by Johnny Ray Gomez and
"Stars of Tomorrow"

Dancing to follow

*Appreciation is expressed to the Olney Foundation for its contribution to the Fun Night/Sportsman's Day Banquet.

**M
O
N
D
A
Y**

TUESDAY, APRIL 28

8:00 a.m. **GENERAL SESSION**
to Conference Rooms 2, 3, & 4
9:00 a.m. Sponsored by —
Nebraska Medical Association

Presiding — Hiram R. Walker, M.D., Kearney

Quality Assurance: The Next Horizon
Jerald R. Schenken, M.D., Omaha
Member, AMA Board of Trustees



Jerald R. Schenken, M.D.

**T
U
E
S
D
A
Y**

**M
O
N
D
A
Y**

GUEST FACULTY

Nebraska Allergy Society

James Jones, M.D.
Senior Staff Physician
Department of Pediatrics
National Jewish Hospital/Asthma Center
Denver, Colorado

Nebraska Society of Anesthesiologists

Michael E. Dunn
President, Michael E. Dunn & Associates, Inc.
Washington, D.C.

Nebraska Chapter, American College of Emergency Physicians

Marshall B. Segal, M.D., J.D.
President, Chicago Academy of Law and Medicine
Chicago, Illinois

Nebraska Medical Association Commission on Hospital Medical Staff

Steven R. Hirschtick
Attorney at Law
Founder of Hirschtick, Chenen, Lemon & Curtis
Los Angeles, California

American Heart Association, Nebraska Affiliate, Lincoln Division

Liberato A. Iannone, M.D.
Director, Cardiovascular Coronary Care Unit
Mercy Hospital Medical Center
Des Moines, Iowa

Timothy Icenogle, M.D.
Heart Transplant Team
University of Arizona Medical Center
Tucson, Arizona

Mark D. McGaughey, M.D.	Annie Nicholson, R.N.
Fellow, Cardiology Division	Nurse Coordinator
Johns Hopkins Hospital	Heart Transplant Team
Baltimore, Maryland	Univ. of Arizona Medical Center
	Tucson, Arizona

Nebraska Society of Internal Medicine/Nebraska Chapter, American College of Physicians

Richard G. Farmer, M.D.
Regent, American College of Physicians
Chairman, Division of Medicine
Cleveland Clinic Foundation
Cleveland, Ohio

Eugene Ogrod, M.D.	Debra Prout
Trustee	Acting Director
American Society of	Health and Public Policy
Internal Medicine	American College of Physicians
Sacramento, California	Washington, D.C.

Nebraska Academy of Ophthalmology

Ronald G. Michels, M.D.
Wilmer Eye Institute
Johns Hopkins Hospital
Baltimore, Maryland

Nebraska Chapter, American Academy of Pediatrics

Robert ten Bensel, M.D.
Professor of Public Health & Pediatrics
University of Minnesota
Division of Human Development & Nutrition
Minneapolis, Minnesota

Nebraska Lung Association

Christian Guilleminault, M.D.
Sleep Disorders Clinic & Research Center
Stanford University School of Medicine
Stanford, California

62nd Annual Meeting of the Nebraska Medical Association Auxiliary



If your physician spouse is eligible to be a Nebraska Medical Association member, you are eligible to be a member of the Auxiliary. Please join us for any or all of the scheduled activities..

WE WELCOME YOU!

Auxiliary PROGRAM

62nd Annual Meeting of the Nebraska Medical Association Auxiliary

A CORDIAL INVITATION IS EXTENDED TO EACH AUXILIARY MEMBER IN NEBRASKA. WE URGE YOU TO REGISTER AND ATTEND ALL OUR ACTIVITIES. WELCOME TO LINCOLN!

Registration: Cornhusker Square Atrium
Monday, April 27, 1987 - 7:30 a.m. - 5:00 p.m.
Tuesday, April 28, 1987 - 8:30 a.m. to 9:30 a.m. and 9:00 a.m. to 11:00 a.m. at the University Club

Convention Committee Chairmen - 1987

General Chairman:
Mrs. Dale Ebers (Gloria)

General Co-Chairman:
Mrs. Donald Larson (Lois)

Registration:
Mrs. Alan Forker (Susie)

Reservations:
Mrs. Glen Lau (Elba)

Brunch:
Mrs. John Reed (Kay)
Mrs. Richard Olney (Marge)

Table Decor:
Mrs. Tom Calvert (Nancy)

Publicity:
Mrs. Rodney Basler (Judy)
Mrs. Larry Fletcher (Peg)

Courtesy:
Mrs. Guy Matson (Dorothy)

Correspondence:
Mrs. Harry Shaffer (Dorothy)



MRS. ROBERT KRUGER
Omaha, Nebraska
President 1986-87



MRS. GEORGE ADAM
Hastings
President 1987-88



MRS. KEMAL KUTAIT
Treasurer, AMA Auxiliary
Fort Smith, Arkansas

Auxiliary PROGRAM

SUNDAY, APRIL 26

- 6:00 p.m. **Presidents' Reception** — Rooms A, B, & C
Honoring the President of the Nebraska Medical Association and the President of the Nebraska Medical Association Auxiliary
- 7:00 p.m. **Inaugural Banquet** — Rooms D, E, & F
Installation of L. Dwight Cherry, M.D.
- Paranormal Mysteries: Fact or Fiction?**
Robert W. McCoy, Golden Valley, Minnesota

MONDAY, APRIL 27

- 7:30 a.m. **Registration**
to
Cornhusker Square Atrium
- 5:00 p.m.
- 8:00 a.m. **Seminar With Spouses** — Conference Room 9
Professional Liability
- 10:40 a.m. **Workshop** — Conference Rooms 2, 3, & 4
Medical Marriages
Dr. Joseph and Carol Rogers
- 12:00 noon **Luncheon** — Room A
Convention Center
- 1:00 p.m. **Annual Board Meeting** —
Conference Rooms 2, 3, & 4
All Members Welcome
Mrs. Robert Kruger (Bev), NMA Auxiliary
President, Presiding
- 3:30 p.m. **CPR Class** — Conference Rooms 2, 3, & 4
(By Reservation Only)
- 7:00 p.m. **Cocktail Hour** — Rooms D & E
- Fun Night/Sportsman's Day Banquet**
Rooms A, B, & C
- Honoring Kenneth E. Neff
- Entertainment by Johnny Ray Gomez
Dancing to Follow

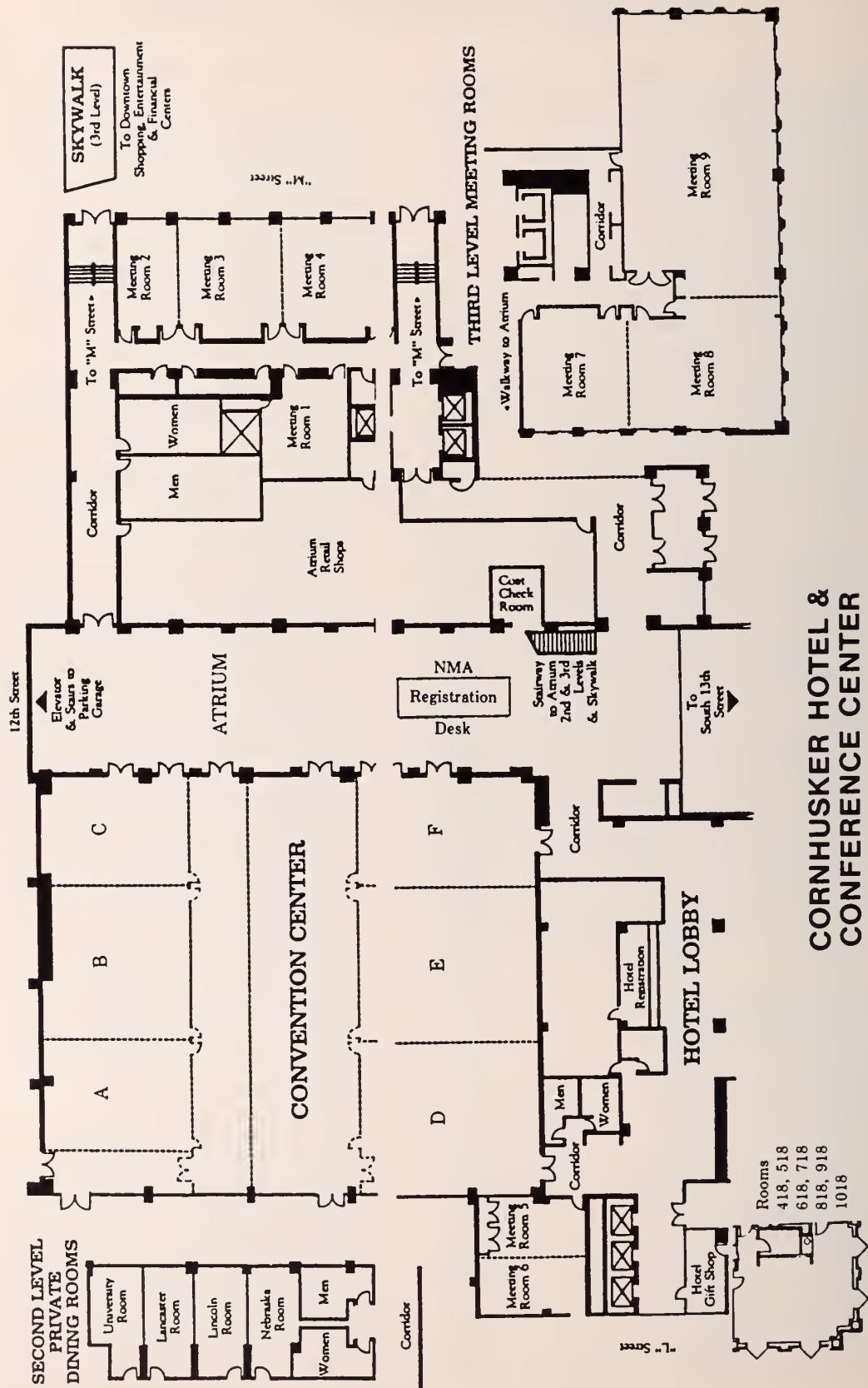
Auxiliary PROGRAM

TUESDAY, APRIL 28, 1987

- 8:30 a.m. **Registration** — Cornhusker Square Atrium
- 9:00 a.m. **House of Delegates, Nebraska Medical Association**
Rooms A, B, & C
Presentation of AMA Education and Research Foundation Checks
Presentation of Nebraska Medical Foundation Student Research Scholarship Program Checks
- 9:00 a.m. **Gavel Club Meeting** — University Club
11th Floor, University Towers
13th & P Streets, Lincoln
- 9:00 a.m. **Registration** — University Club
11th Floor, University Towers,
13th & P Streets, Lincoln
- 10:00 a.m. **AWARDS BRUNCH** — University Club
11th Floor, University Towers,
13th & P Streets, Lincoln
- Special Guests:
Mrs. Kemal E. Kutait (Virginia), Treasurer
American Medical Association Auxiliary, Inc.
Fort Smith, Arkansas
- Jerald R. Schenken, M.D., Omaha
Member, AMA Board of Trustees
- Presentation of Awards
Installation of Officers
- 1:15 p.m. **Post Convention Board Meeting**
University Club, 11th Floor
University Towers, 13th & P Streets, Lincoln
- All Members Welcome
- Mrs. George Adam (Colleen)
1987-88 NMA Auxiliary President, Presiding
- 3:00 p.m. **CPR Class** — Conference Room 9
(By Reservation Only)

Past Presidents Nebraska Medical Association

Gilbert C. Monell, M.D., Omaha	1868-69	B. R. McGrath, M.D., Grand Island	1928-29
James H. Peabody, M.D., Omaha	1869-70		(to 5-14-29)
N. B. Larsh, M.D., Nebraska City.....	1870-71	F. S. Owen, M.D., Omaha	1929-30
R. R. Livingston, M.D., Plattsmouth.....	1871-72	K. S. J. Hohlen, M.D., Lincoln	1930-31
A. Bowen, M.D., Nebraska City.....	1872-73	Lucien Stark, M.D., Norfolk.....	1931-32
H. P. Mathewson, M.D., Omaha	1873-74	A. E. Cook, M.D., Randolph.....	1932-33
John Black, M.D., Plattsmouth.....	1874-75	Adolph Sachs, M.D., Omaha.....	1933-34
L. H. Robbins, M.D., Lincoln.....	1875-76	Joseph Bixby, M.D., Geneva.....	1934-35
J. P. Peck, M.D., Omaha	1876-77	Claude A. Selby, M.D., North Platte.....	1935-36
L. J. Abbott, M.D., Fremont.....	1877-78	George W. Covey, M.D., Lincoln.....	1936-37
E. M. Whitten, M.D., Nebraska City	1878-79	R. W. Fouts, M.D., Omaha.....	1937-38
Harvey Link, M.D., Millard	1879-80	Homer Davis, M.D., Genoa	1938-39
S. D. Mercer, M.D., Omaha.....	1880-81	A. L. Miller, M.D., Kimball.....	1939-40
M. W. Stone, M.D., South Omaha	1881-82	Clayton F. Andrews, M.D., Lincoln.....	1940-41
A. H. Sowers, M.D., Lincoln	1882-83	W. P. Wherry, M.D., Omaha	1941-42
Victor H. Coffman, M.D., Omaha.....	1883-84	Dexter D. King, M.D., York	1942-43
F. G. Fuller, M.D., Grand Island	1884-85	A. L. Cooper, M.D., Scottsbluff	1943-44
W. W. Knapp, M.D., Lincoln	1885-86	Floyd L. Rogers, M.D., Lincoln	1944-45
Richard C. Moore, M.D., Omaha.....	1886-87	Charles McMartin, M.D., Omaha.....	1945-46
George H. Peebles, M.D., Lincoln.....	1887-88	Earle G. Johnson, M.D., Grand Island.....	1946-47
Milton Lane, M.D., Kearney	1888-89	G. E. Charlton, M.D., Norfolk	1947-48
J. C. Denise, M.D., Omaha.....	1889-90	J. E. M. Thomson, M.D., Lincoln.....	1948-49
D. A. Walden, M.D., Beatrice	1890-91	J. D. McCarthy, M.D., Omaha.....	1949-50
Charles Inches, M.D., Scribner.....	1891-92	C. H. Sheets, M.D., Cozad.....	1950-51
M. L. Hildreth, M.D., Lyons.....	1892-93	D. B. Steenburg, M.D., Aurora.....	1951-52
A. S. von Mansfelde, M.D., Ashland	1893-94	Harold S. Morgan, M.D., Lincoln	1952-53
H. B. Lowry, M.D., Lincoln.....	1894-95	James F. Kelly, M.D., Omaha.....	1953-54
J. E. Summers, M.D., Omaha.....	1895-96	Earl F. Leininger, M.D., McCook.....	1954-55
F. D. Haldeman, M.D., Ord	1896-97	Wm. E. Wright, M.D., Creighton	1955-56
Wilson O. Bridges, M.D., Omaha	1897-98	J. M. Woodward, M.D., Lincoln	1956-57
A. R. Mitchell, M.D., Lincoln	1898-99	R. Russell Best, M.D., Omaha	1957-58
Robert McConaughy, M.D., York	1899-00	Fay Smith, M.D., Imperial.....	1958-59
H. M. McClanahan, M.D., Omaha.....	1900-01	E. E. Koebbe, M.D., Columbus	1959-60
Wm. B. Eby, M.D., Ainsworth	1901-02	Fritz Teal, M.D., Lincoln	1960-61
A. B. Anderson, M.D., Pawnee City.....	1902-03	A. J. Offerman, M.D., Omaha.....	1961-62
B. F. Crummer, M.D., Omaha	1903-04	O. A. Kostal, M.D., Hastings.....	1962-63
R. C. McDonald, M.D., Fremont	1904-05	R. F. Sievers, M.D., Blair	1963-64
A. F. Jonas, M.D., Omaha	1905-06	R. E. Garlinghouse, M.D., Lincoln	1964-65
F. A. Long, M.D., Madison.....	1906-07	Willis D. Wright, M.D., Omaha	1965-66
Harold Gifford, M.D., Omaha	1907-08	Dan A. Nye, M.D., Kearney.....	1966-67
L. M. Shaw, M.D., Osceola	1908-09	Robert J. Morgan, M.D., Alliance	1967-68
P. H. Salter, M.D., Norfolk.....	1909-10	Frank H. Tanner, M.D., Lincoln.....	1968-69
J. P. Lord, M.D., Omaha	1910-11	J. Whitney Kelley, M.D., Omaha.....	1969-70
A. D. Nesbit, M.D., Tekamah.....	1911-12	Clarence R. Brott, M.D., Beatrice.....	1970-71
I. N. Pickett, M.D., Odell.....	1912-13	Roger D. Mason, M.D., McCook.....	1971-72
D. C. Bryant, M.D., Omaha	1913-14	Frank P. Stone, M.D., Lincoln	1972-73
J. P. Gilligan, M.D., O'Neill	1914-15	John D. Coe, M.D., Omaha.....	1973-74
E. W. Rowe, M.D., Lincoln.....	1915-16	James H. Dunlap, M.D., Norfolk.....	1974-75
W. F. Milroy, M.D., Omaha.....	1916-17	Warren G. Bosley, M.D., Grand Island.....	1975-76
	(to 12-31-17)	Harlan L. Papenfuss, M.D., Lincoln.....	1976-77
C. L. Mullins, M.D., Broken Bow.....	1918	Arnold W. Lempka, M.D., Omaha	1977-78
J. M. Bannister, M.D., Omaha	1919	Houtz G. Steenburg, M.D., Torrington, Wyo.....	1978-79
H. W. Orr, M.D., Lincoln	1920	Charles W. Landgraf, Jr., M.D., Hastings.....	1979-80
M. S. Moore, M.D., Gothenburg	1921	Russell L. Gorthey, M.D., Lincoln.....	1980-81
B. B. Davis, M.D., Omaha.....	1922	Carlyle E. Wilson, Jr., M.D., Borrego Springs, CA	1981-82
B. F. Bailey, M.D., Lincoln.....	1923	Allan C. Landers, M.D., Scottsbluff	1982-83
Morris Nielsen, M.D., Blair.....	1924	Dwayne J. Peetz, M.D., Neligh.....	1983-84
Palmer Findley, M.D., Omaha.....	1925	Herbert E. Reese, M.D., Lincoln.....	1984-85
H. J. Lehnhoff, M.D., Lincoln	1926	Francis D. Donahue, M.D., Omaha	1985-86
H. E. Potter, M.D., Fairbury.....	1927		



CORNHUSKER HOTEL & CONFERENCE CENTER

Motrin[®] 800mg

TABLETS
ibuprofen



Extra strength
Convenience
Economy



A Century
of Caring
1886-1986



There's never been
a better time for her..
and
PREMARIN[®]
(Conjugated Estrogens Tablets)

Now the evidence looks better than ever

Significantly reduced risk of endometrial hyperplasia

Endometrial hyperplasia was significantly reduced when progestin was added to PREMARIN therapy for more than ten days a month.¹⁻⁴ The risk of endometrial hyperplasia may also be reduced through cyclic administration of unopposed, low-dose PREMARIN.

Effect on lipids—an important feature

PREMARIN used alone does not adversely affect lipid levels. In fact, a clinical study has shown a significant increase in HDL cholesterol—from 49.7 mg/dL to 56.4 mg/dL—and decrease in LDL cholesterol—from 165.1 mg/dL to 138.1 mg/dL—after one year of therapy with PREMARIN, 0.625 mg.⁵

Low-dose control of menopausal symptoms*

PREMARIN effectively relieves vasomotor symptoms, such as hot flashes. When estrogen deficiency is limited to atrophic vaginitis, PREMARIN® (conjugated estrogens) Vaginal Cream restores the vaginal environment to its premenopausal state.

The most widely used, most extensively studied estrogen worldwide.

PREMARIN®
(Conjugated Estrogens Tablets)

Most trusted for more reasons

*PREMARIN is indicated for moderate-to-severe vasomotor symptoms.

Please see following page for brief summary of prescribing information.

For moderate-to-severe
vasomotor symptoms

PREMARIN® (Conjugated Estrogens Tablets)



0.3 mg 0.625 mg 0.9 mg 1.25 mg 2.5 mg

The appearance of these tablets is a trademark of Ayerst Laboratories.

For atrophic vaginitis

PREMARIN® (Conjugated Estrogens)

Vaginal
Cream

0.625mg/g



BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION AND PATIENT INFORMATION, SEE PACKAGE CIRCULARS.)

PREMARIN® Brand of conjugated estrogens tablets, USP
PREMARIN® Brand of conjugated estrogens Vaginal Cream in a nonliquefying base

1. ESTROGENS HAVE BEEN REPORTED TO INCREASE THE RISK OF ENDOMETRIAL CARCINOMA.

Three independent case control studies have reported an increased risk of endometrial cancer in postmenopausal women exposed to exogenous estrogens for more than one year. This risk was independent of the other known risk factors for endometrial cancer. These studies are further supported by the finding that incidence rates of endometrial cancer have increased sharply since 1969 in eight different areas of the United States with population-based cancer reporting systems, an increase which may be related to the rapidly expanding use of estrogens during the last decade. The three case control studies reported that the risk of endometrial cancer in estrogen users was about 4.5 to 13.9 times greater than in nonusers. The risk appears to depend on both duration of treatment and on estrogen dose. In view of these findings, when estrogens are used for the treatment of menopausal symptoms, the lowest dose that will control symptoms should be utilized and medication should be discontinued as soon as possible. When prolonged treatment is medically indicated, the patient should be reassessed on at least a semiannual basis to determine the need for continued therapy. Although the evidence must be considered preliminary, one study suggests that cyclic administration of low doses of estrogen may carry less risk than continuous administration; it therefore appears prudent to utilize such a regimen. Close clinical surveillance of all women taking estrogens is important. In all cases of undiagnosed persistent or recurring abnormal vaginal bleeding, adequate diagnostic measures should be undertaken to rule out malignancy. There is no evidence at present that "natural" estrogens are more or less hazardous than "synthetic" estrogens at equieffective doses.

2. ESTROGENS SHOULD NOT BE USED DURING PREGNANCY.

The use of female sex hormones, both estrogens and progestogens, during early pregnancy may seriously damage the offspring. It has been shown that females exposed in utero to diethylstilbestrol, a non-steroidal estrogen, have an increased risk of developing in later life a form of vaginal or cervical cancer that is ordinarily extremely rare. This risk has been estimated as not greater than 4 per 1,000 exposures. Furthermore, a high percentage of such exposed women (from 30% to 90%) have been found to have vaginal adenosis, epithelial changes of the vagina and cervix. Although these changes are histologically benign, it is not known whether they are precursors of malignancy. Although similar data are not available with the use of other estrogens, it cannot be presumed they would not induce similar changes. Several reports suggest an association between intrauterine exposure to female sex hormones and congenital anomalies, including congenital heart defects and limb reduction defects. One case control study estimated a 4.7-fold increased risk of limb reduction defects in infants exposed in utero to sex hormones (oral contraceptives, hormone withdrawal tests for pregnancy, or attempted treatment for threatened abortion). Some of these exposures were very short and involved only a few days of treatment. The data suggest that the risk of limb reduction defects in exposed fetuses is somewhat less than 1 per 1,000. In the past, female sex hormones have been used during pregnancy in an attempt to treat threatened or habitual abortion. There is considerable evidence that estrogens are ineffective for these indications, and there is no evidence from well controlled studies that progestogens are effective for these uses. If PREMARIN is used during pregnancy, or if the patient becomes pregnant while taking this drug, she should be apprised of the potential risks to the fetus, and the advisability of pregnancy continuation.

DESCRIPTION: PREMARIN (conjugated estrogens, USP) contains a mixture of estrogens, obtained exclusively from natural sources, blended to represent the average composition of material derived from pregnant mare's urine. It contains estrone, equilin, and 17 α -dihydroequilin, together with smaller amounts of 17 α -estradiol, equilenin, and 17 α -dihydroequilenin as salts of their sulfate esters. Tablets are available in 0.3 mg, 0.625 mg, 0.9 mg, 1.25 mg, and 2.5 mg strengths of conjugated estrogens. Cream is available as 0.625 mg conjugated estrogens per gram.

INDICATIONS AND USAGE: PREMARIN (conjugated estrogens tablets, USP): Moderate-to-severe vasomotor symptoms associated with the menopause (There is no evidence that estrogens are effective for nervous symptoms or depression without associated vasomotor symptoms and they should not be used to treat such conditions.) Osteoporosis (abnormally low bone mass). Atrophic vaginitis. Kraurosis vulvae. Female castration.

PREMARIN (conjugated estrogens) Vaginal Cream is indicated in the treatment of atrophic vaginitis and kraurosis vulvae. PREMARIN HAS NOT BEEN SHOWN TO BE EFFECTIVE FOR ANY PURPOSE DURING PREGNANCY AND ITS USE MAY CAUSE SEVERE HARM TO THE FETUS (SEE BOXED WARNING).

Concomitant Progestin Use: The lowest effective dose appropriate for the specific indication should be utilized. Studies of the addition of a progestin for 7 or more days of a cycle of estrogen administration have reported a lowered incidence of endometrial hyperplasia. Morphological and biochemical studies of the endometrium suggest that 10 to 13 days of progestin are needed to provide maximal maturation of the endometrium and to eliminate any hyperplastic changes. Whether this will provide protection from endometrial carcinoma has not been clearly established. There are possible additional risks which may be associated with the inclusion of progestin in estrogen replacement regimens. (See PRECAUTIONS.) The choice of progestin and dosage may be important; product labeling should be reviewed to minimize possible adverse effects.

CONTRAINDICATIONS: Estrogens should not be used in women (or men) with any of the following conditions: 1. Known or suspected cancer of the breast except in appropriately selected patients being treated for metastatic disease. 2. Known or suspected estrogen-dependent neoplasia. 3. Known or suspected pregnancy (See Boxed Warning). 4. Undiagnosed abnormal genital bleeding. 5. Active thrombophlebitis or thromboembolic disorders. 6. A past history of thrombophlebitis, thrombosis, or thromboembolic disorders associated with previous estrogen use (except when used in treatment of breast or prostatic malignancy).

WARNINGS: Long-term continuous administration of natural and synthetic estrogens in certain animal species increases the frequency of carcinomas of the breast, cervix, vagina, and liver. There are now reports that estrogens increase the risk of carcinoma of the endometrium in humans. (See Boxed Warning.) At the present time there is no satisfactory evidence that estrogens given to postmenopausal women increase the risk of cancer of the breast, although a recent study has raised this possibility. There is a need for caution in prescribing estrogens for women with a strong family history of breast cancer or who have breast nodules, fibrocystic disease, or abnormal mammograms. A recent study has reported a 2- to 3-fold increase in the risk of surgically confirmed gallbladder disease in women receiving postmenopausal estrogens.

Adverse effects of oral contraceptives may be expected at the larger doses of estrogen used to treat prostatic or breast cancer or postpartum breast engorgement; it has been shown that there is an increased risk of thrombosis in men receiving estrogens for prostatic cancer and women for postpartum breast engorgement. Users of oral contraceptives have an increased risk of diseases, such as thrombophlebitis, pulmonary embolism, stroke, and myocardial infarction. Cases of retinal thrombosis, mesenteric thrombosis, and optic neuritis have been reported in oral contraceptive users. An increased risk of postsurgery thromboembolic complications has also been reported in users of oral contraceptives. If feasible, estrogen should be discontinued at least 4 weeks before surgery of the type associated with an increased risk of thromboembolism, or during periods of prolonged immobilization. Estrogens should not be used in persons with active thrombophlebitis, thromboembolic disorders, or in persons with a history of such disorders in association with estrogen use. They should be used with

caution in patients with cerebral vascular or coronary artery disease. Large doses (5 mg conjugated estrogens per day), comparable to those used to treat cancer of the prostate and breast, have been shown to increase the risk of nonfatal myocardial infarction, pulmonary embolism and thrombophlebitis. When doses of this size are used, any of the thromboembolic and thrombotic adverse effects should be considered a clear risk.

Benign hepatic adenomas should be considered in estrogen users having abdominal pain and tenderness, abdominal mass, or hypovolemic shock. Hepatocellular carcinoma has been reported in women taking estrogen-containing oral contraceptives. Increased blood pressure may occur with use of estrogens in the menopause and blood pressure should be monitored with estrogen use. A worsening of glucose tolerance has been observed in patients on estrogen-containing oral contraceptives. For this reason, diabetic patients should be carefully observed. Estrogens may lead to severe hypercalcemia in patients with breast cancer and bone metastases.

PRECAUTIONS: Physical examination and a complete medical and family history should be taken prior to the initiation of any estrogen therapy with special reference to blood pressure, breasts, abdomen, and pelvic organs, and should include a Papanicolaou smear. As a general rule, estrogen should not be prescribed for longer than one year without another physical examination being performed. Conditions influenced by fluid retention such as asthma, epilepsy, migraine, and cardiac or renal dysfunction, require careful observation. Certain patients may develop manifestations of excessive estrogenic stimulation, such as abnormal or excessive uterine bleeding, mastodynia, etc. Prolonged administration of unopposed estrogen therapy has been reported to increase the risk of endometrial hyperplasia in some patients. Oral contraceptives appear to be associated with an increased incidence of mental depression. Patients with a history of depression should be carefully observed. Preexisting uterine leiomyomata may increase in size during estrogen use. The pathologist should be advised of estrogen therapy when relevant specimens are submitted. If jaundice develops in any patient receiving estrogen, the medication should be discontinued while the cause is investigated. Estrogens should be used with care in patients with impaired liver function, renal insufficiency, metabolic bone diseases associated with hypercalcemia, or in young patients in whom bone growth is not complete. If concomitant progestin therapy is used, potential risks may include adverse effects on carbohydrate and lipid metabolism.

The following changes may be expected with larger doses of estrogen.

- Increased sulfobromophthalein retention.
- Increased prothrombin and factors VII, VIII, IX, and X, decreased antithrombin 3; increased norepinephrine-induced platelet aggregability.
- Increased thyroid binding globulin (TBG) leading to increased circulating total thyroid hormone, as measured by PBI, T4 by column, or T4 by radioimmunoassay. Free T3 resin uptake is decreased, reflecting the elevated TBG; free T4 concentration is unaltered.
- Impaired glucose tolerance.
- Decreased pregnandiol excretion.
- Reduced response to metoprolol test.
- Reduced serum folate concentration.
- Increased serum triglyceride and phospholipid concentration.

As a general principle, the administration of any drug to nursing mothers should be done only when clearly necessary since many drugs are excreted in human milk.

ADVERSE REACTIONS: The following have been reported with estrogenic therapy, including oral contraceptives: breakthrough bleeding, spotting, change in menstrual flow, dysmenorrhea, premenstrual-like syndrome, amenorrhea during and after treatment, increase in size of uterine fibromyomata, vaginal candidiasis, change in cervical erosion and in degree of cervical secretion, cystitis-like syndrome; tenderness, enlargement, secretion (of breasts); nausea, vomiting, abdominal cramps, bloating, cholestatic jaundice; chloasma or melasma which may persist when drug is discontinued; erythema multiforme, erythema nodosum; hemorrhagic eruption; loss of scalp hair; hirsutism; steepening of corneal curvature; intolerance to contact lenses; headache, migraine, dizziness, mental depression, chorea; increase or decrease in weight; reduced carbohydrate tolerance; aggravation of porphyria; edema; changes in libido.

ACUTE OVERDOSAGE: May cause nausea, and withdrawal bleeding may occur in females.

DOSEAGE AND ADMINISTRATION:

PREMARIN® Brand of conjugated estrogens tablets, USP

- Given cyclically for short-term use only. For treatment of moderate to severe vasomotor symptoms, atrophic vaginitis, or kraurosis vulvae associated with the menopause (0.3 to 1.25 mg or more daily). The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible. Administration should be cyclic (eg, three weeks on and one week off). Attempts to discontinue or taper medication should be made at three- to six-month intervals.
- Given cyclically: Female castration. Osteoporosis. Female castration—1.25 mg daily, cyclically. Adjust upward or downward according to response of the patient. For maintenance, adjust dosage to lowest level that will provide effective control. Osteoporosis—0.625 mg daily. Administration should be cyclic (eg, three weeks on and one week off).

Patients with an intact uterus should be monitored for signs of endometrial cancer and appropriate measures taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

PREMARIN® Brand of conjugated estrogens Vaginal Cream

Given cyclically for short-term use only. For treatment of atrophic vaginitis or kraurosis vulvae.

The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible.

Administration should be cyclic (eg, three weeks on and one week off).

Attempts to discontinue or taper medication should be made at three-to-six month intervals.

Usual dosage range: 2 to 4 g daily, intravaginally, depending on the severity of the condition.

Treated patients with an intact uterus should be monitored closely for signs of endometrial cancer and appropriate diagnostic measures should be taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

References:

- Whitehead MI, Townsend PT, Pryse-Davies J, et al: Effects of estrogens and progestins on the biochemistry and morphology of the postmenopausal endometrium. *N Engl J Med* 1981;305:1599-1605.
- Paterson MEL, Wade-Evans T, Sturdee DW, et al: Endometrial disease after treatment with oestrogens and progestogens in the climacteric. *Br Med J* 1980;280:822-824.
- Magos AL, Brincat M, Studd JWW, et al: Amenorrhea and endometrial atrophy with continuous oral estrogen and progestogen therapy in postmenopausal women. *Obstet Gynecol* 1985;67:496-499.
- Whitehead MI, Lane G, Siddle N, et al: Avoidance of endometrial hyperstimulation in estrogen-treated postmenopausal women. *Semin Reprod Endocrinol* 1983;1:141-152.
- Barnes RB, Roy S, Lobo RA: Comparison of lipid and androgen levels after conjugated estrogen or depo-medroxyprogesterone acetate treatment in postmenopausal women. *Obstet Gynecol* 1985;66:216-219.

© 1986 Ayerst Laboratories

Ayerst

AYERST LABORATORIES
New York, NY 10017

T 6194/886

Nebraska Medical Association Officers and Commissions

OFFICERS

Hiram R. Walker, M.D., Kearney	President
L. Dwight Cherry, M.D., Lincoln	President-Elect
Robert F. Shapiro, M.D., Lincoln	Secretary-Treasurer
William L. Schellpeper, Lincoln	Executive Director
James K. Ruigh, Lincoln	Assistant Executive Director

BOARD OF DIRECTORS

Hiram R. Walker, Kearney	Chairman
L. Dwight Cherry, M.D., Lincoln	Vice-Chairman
Robert F. Shapiro, M.D., Lincoln	Secretary-Treasurer
Francis D. Donahue, M.D., Omaha	Past President
Paul E. Collicott, M.D., Lincoln	
Richard A. Raymond, M.D., O'Neill	
Donald J. Pavelka, M.D., Omaha	
Alvin A. Armstrong, M.D., Scottsbluff	
Richard H. Meissner, M.D., Omaha	
Stanley M. Truhlsen, M.D., Omaha	

COMMISSION ON ASSOCIATION AFFAIRS

Harry W. McFadden, M.D., Chairman	Omaha
R. A. Blatny, M.D., Fairbury	
Stuart P. Embury, M.D., Holdrege	
Joel T. Johnson, M.D., Kearney	
Bernard L. Kratochvil, M.D., Omaha	
Walter O'Donohue, M.D., Omaha	
Joseph E. Stitcher, M.D., Lincoln	
R. C. Weldon, M.D., Nebraska City	

SCIENTIFIC SESSIONS COMMITTEE

Sushil S. Lacy, M.D., Chairman	Lincoln
Donald E. Waltemath, M.D., Convention Chairman	Lincoln
David L. Bacon, M.D., Kearney	
Paul J. Bender, Jr., M.D., Omaha	
Michael A. Breiner, M.D., Lincoln	
Mark A. Christensen, M.D., Omaha	
Richard A. Hranac, M.D., Kearney	
Donald J. Larson, M.D., Lincoln	
Donna K. Nelson, M.D., Omaha	
Richard M. Tempero, M.D., Omaha	

COMMISSION ON MEDICAL SERVICES

William L. Rumbolz, M.D., Chairman	Omaha
Patrick E. Clare, M.D., Lincoln	
C. J. Cornelius, Jr., M.D., Sidney	
Richard A. Hranac, M.D., Kearney	
F. William Karrer, M.D., Omaha	
Dale E. Michels, M.D., Lincoln	
Robert G. Osborne, M.D., Lincoln	
Richard J. Petersen, M.D., Omaha	
Kenton L. Shaffer, M.D., Kearney	

AD-HOC COMMITTEE ON ATHLETIC MEDICINE

Patrick E. Clare, M.D., Chairman	Lincoln
Stanley M. Bach, M.D., Omaha	
Warren G. Bosley, M.D., Grand Island	
S. I. Fuenning, M.D., Lincoln	
Jack K. Lewis, M.D., Omaha	
Morris B. Mellon, M.D., Omaha	
Richard A. Raymond, M.D., O'Neill	
Wm. Michael Walsh, M.D., Omaha	
George F. Sullivan, R.P.T., Lincoln	
Wayne Wagner, A.T.C., Omaha	

AD-HOC COMMITTEE ON MATERNAL & CHILD HEALTH

Kenton L. Shaffer, M.D., Chairman	Kearney
Section on Maternal Mortality Review	
George M. Adam, M.D., Hastings	
James G. Cummins, M.D., Omaha	
L. Palmer Johnson, M.D., Lincoln	
William Rayburn, M.D., Omaha	
William L. Rumbolz, M.D., Omaha	
Larry Wilson, M.D., Gothenburg	
Section on Perinatal Mortality Review	
Lawrence C. Bausch, M.D., Lincoln	
Stacie R. Bleicher, M.D., Lincoln	
Robert S. Grant, M.D., Lincoln	
Robert M. Nelson, M.D., Omaha	

AD-HOC COMMITTEE ON PSYCHIATRY

Robert G. Osborne, M.D., Chairman	Lincoln
Jehangir B. Bastani, M.D., Lincoln	
Klaus Hartmann, M.D., Lincoln	
Harry C. Henderson, Jr., M.D., Omaha	
J. Whitney Kelley, M.D., Omaha	
William B. Long, M.D., Omaha	
Merle Sjogren, M.D., Kearney	

AMA Delegates — C. J. Cornelius, Jr., M.D., Sidney; John D. Coe, M.D., Omaha; AMA Alternate Delegates — Louis J. Gogela, M.D., Lincoln; Blaine Y. Roffman, M.D., Omaha.

AD-HOC COMMITTEE ON GERIATRICS

Richard A. Hranac, M.D., Chairman	Kearney
Ronald L. Asher, M.D., North Platte	
J. Whitney Kelley, M.D., Omaha	
Jane F. Potter, M.D., Omaha	
William J. Reedy, M.D., Omaha	
John A. Ursick, M.D., Omaha	
Vernon G. Ward, M.D., Omaha	
Frederick Youngblood, M.D., Omaha	

AD-HOC COMMITTEE ON ALTERNATE HEALTH PLANS I

Carl J. Cornelius, Jr., M.D., Chairman	Sidney
Warren G. Bosley, M.D., Grand Island	
Dale W. Ebers, M.D., Lincoln	
Vernon F. Garwood, M.D., Lincoln	
Richard H. Meissner, M.D., Omaha	

Ex-Officio:

Michael J. Haller, M.D., Omaha	
Roger D. Mason, M.D., Omaha	

AD-HOC COMMITTEE ON ALTERNATE HEALTH PLANS II

Dale E. Michels, M.D., Chairman	Lincoln
Lonnie S. Albers, M.D., Lincoln	
Audrey A. Paulman, M.D., Omaha	
Dwaine J. Peetz, Jr., M.D., Omaha	
Harlan C. Shriner, M.D., Lincoln	
Sebastian J. Troia, M.D., Omaha	

COMMITTEE ON HEALTH PLANNING

Carl J. Cornelius, Jr., M.D., Chairman	Sidney
Gordon D. Adams, M.D., Norfolk	
Lewiston W. Birkmann, M.D., Lincoln	
James S. Carson, M.D., McCook	
Chris C. Caudill, M.D., Lincoln	
Allen D. Dvorak, M.D., Omaha	
Dale W. Ebers, M.D., Lincoln	
Louis J. Gogela, Jr., M.D., Beatrice	
Roger D. Mason, M.D., Omaha	
Donald F. Prince, M.D., Minden	
C. Lee Retelsdorf, M.D., Omaha	
Thomas H. Wallace, M.D., Gordon	

AD-HOC COMMITTEE ON TUMOR REGISTRY

F. William Karrer, M.D., Chairman	Omaha
Elvin G. Brown, M.D., Hastings	
John H. Casey, M.D., Lincoln	
James R. Commers, M.D., Omaha	
John B. Davis, M.D., Omaha	
Howard A. Dinsdale, M.D., Lincoln	
C. Lee Retelsdorf, M.D., Omaha	
Ron D. Scott, M.D., Kearney	

AD-HOC COMMITTEE ON LOW LEVEL RADIATION WASTE DISPOSAL

Richard J. Petersen, M.D., Chairman	Omaha
Allen D. Dvorak, M.D., Omaha	
Stanley Jaeger, M.S., Omaha	
Martin R. Lohff, M.D., Omaha	
Wm. H. Northwall, M.D., Kearney	
Merton A. Quaipe, M.D., Omaha	
Jerald R. Schenken, M.D., Omaha	
Paul Steffes, M.D., Omaha	

COMMISSION ON LEGISLATION AND GOVERNMENTAL AFFAIRS

Craig L. Urbauer, M.D., Chairman	Lincoln
Ronald L. Klutman, M.D., Co-Chairman	Columbus
Dwaine J. Peetz, M.D., Advisor	Neligh
Judith A. Butler, M.D., Superior	
James H. Dunlap, M.D., Norfolk	
Dale W. Ebers, M.D., Lincoln	
Charles Gregorius, M.D., Lincoln	
Bruce W. Henricks, M.D., Fremont	
Barbara M. Heywood, M.D., Papillion	
John T. McGreer, III, M.D., Lincoln	
Dennis G. O'Leary, M.D., Omaha	
Robert G. Osborne, M.D., Lincoln	
Richard A. Raymond, M.D., O'Neill	
Herbert E. Reese, M.D., Lincoln	
Blaine Y. Roffman, M.D., Omaha	
Jerald R. Schenken, M.D., Omaha	
Bruce D. Smith, M.D., Kearney	

Todd S. Sorensen, M.D. Scottsbluff
 Richard B. Svehla, M.D. Omaha
 Mylan R. VanNewkirk, M.D. Scottsbluff
 Timothy O. Wahl, M.D. Omaha

AD-HOC COMMITTEE ON HEALTH POLICY STATEMENTS

C. Lee Retelsdorf, M.D., Chairman. Omaha
 Daniel S. Durrie, M.D. Omaha
 Darroll J. Loschen, M.D. York
 Dale E. Michels, M.D. Lincoln
 Charles S. Wilson, M.D. Lincoln
 Frederick Youngblood, M.D. Omaha

AD-HOC COMMITTEE ON PROFESSIONAL LIABILITY

James H. Dunlap, M.D., Chairman. Norfolk
 David L. Bacon, M.D. Kearney
 Warren G. Bosley, M.D. Grand Island
 Ernest W. Chupp, M.D. Omaha
 F. M. Gawecki, M.D. Papillion
 Dwaine J. Peetz, M.D. Neligh
 Herbert E. Reese, M.D. Lincoln
 Blaine Y. Roffman, M.D. Omaha

COMMISSION ON MEDICAL EDUCATION

Frederick F. Paustian, M.D., Chairman. Omaha
 Robert L. Bass, M.D. Elkhorn
 Patrick E. Brookhouser, M.D. Omaha
 Christopher P. Crotty, M.D. Omaha
 Charles F. Damico, M.D. Hastings
 Charles A. Dobry, M.D. Omaha
 A. Dean Gilg, M.D. Lincoln
 William E. Lundak, M.D. Lincoln
 Richard L. O'Brien, M.D. Omaha
 Dwaine J. Peetz, Jr., M.D. Omaha
 Joseph C. Scott, M.D. Omaha
 Robert H. Waldman, M.D. Omaha

AD-HOC COMMITTEE ON HEALTH EDUCATION

Warren G. Bosley, M.D., Chairman. Grand Island
 Stephen J. Lanspa, M.D. Omaha
 Paul H. Phillips, M.D. Scottsbluff
 Eileen C. Vautravers, M.D. Lincoln
 Wesley G. Wilhelm, M.D. Omaha
 Gregg F. Wright, M.D. Lincoln

COMMISSION ON PUBLIC AFFAIRS

Rodney S. W. Basler, M.D., Chairman. Lincoln
 H. Jeffrey Deeths, M.D. Omaha
 Herbert D. Feidler, M.D. Norfolk
 Edward E. Gatz, M.D. Omaha
 Donald T. Glow, M.D. Omaha
 John J. Hoelsing, M.D. Omaha
 Roger P. Massie, M.D. Plainview
 Donald E. Mathews, M.D. Lincoln
 Harlan C. Shriner, M.D. Lincoln
 F. Thomas Waring, M.D. Fremont

COMMISSION ON HOSPITAL MEDICAL STAFF

Steven A. Schwid, M.D., Chairman. Omaha
 Richard A. Hranac, M.D. Kearney
 Harry E. Keig, M.D. Papillion
 Glen F. Lau, M.D. Lincoln
 Barney B. Rees, M.D. Omaha
 Joseph G. Rogers, M.D. Lincoln
 Gerald Rounsborg, M.D. North Platte
 William A. Shiffermiller, M.D. Omaha
 Stephen D. Torpy, M.D. Omaha

COUNCILOR DISTRICTS AND COUNTIES

First District: Councilor: Stanley M. Truhlsen, Omaha. Counties: Douglas, Sarpy.
 Second District: Councilor: Howard A. Dinsdale, Lincoln. Counties: Cass, Lancaster, Otoe.
 Third District: Councilor: C. T. Frerichs, Beatrice. Counties: Gage, Johnson, Nemaha, Pawnee, Richardson.
 Fourth District: Councilor: Roger Massie, Plainview. Counties: Antelope, Cedar, Cuming, Dakota, Dixon, Knox, Madison, Pierce, Stanton, Thurston, Wayne.
 Fifth District: Councilor: William Chleborad, M.D., Fremont. Counties: Boone, Burt, Colfax, Dodge, Merrick, Nance, Platte, Washington.
 Sixth District: Councilor: Robert Herpol-sheimer, M.D., Seward. Counties: But-ler, Hamilton, Polk, Saunders, Seward, York.
 Seventh District: Councilor: Robert Quick, M.D., Crete. Counties: Clay, Fillmore, Jefferson, Nuckolls, Saline, Thayer.
 Eighth District: Councilor: Floyd H. Shif-fermiller, Ainsworth. Counties: Boyd, Brown, Cherry, Holt, Keya Paha, Rock, Sheridan.
 Ninth District: Councilor: Stanley Nab-ity, Grand Island. Counties: Blaine, Buffalo, Custer, Dawson, Garfield, Grant, Greeley, Hall, Hooker, Howard, Loup, Sherman, Thomas, Valley, Wheeler.
 Tenth District: Councilor: David R. Little, M.D., Hastings. Counties: Adams, Chase, Dundy, Franklin, Frontier, Furnas, Gosper, Harlan, Hayes, Hitchcock, Kearney, Phelps, Red Willow, Webster.
 Eleventh District: Councilor: Donald E. Fischer, North Platte. Counties: Arthur, Deuel, Garden, Keith, Lincoln, Logan, McPherson, Perkins.
 Twelfth District: Councilor: Donald E. Wil-kinson, Alliance. Counties: Banner, Box Butte, Cheyenne, Dawes, Kimball, Morrill, Scotts Bluff, Sioux.

NEBRASKA MEDICAL ASSOCIATION Councilor Districts and Component County Medical Societies COMPONENT COUNTY MEDICAL SOCIETIES

COUNTY	PRESIDENT	SECRETARY-TREASURER
Adams	Kevin Wycoff, Hastings	Richard French, Hastings
Antelope-Pierce	Kenneth Peters, Plainview	David Johnson, Osmond
Box Butte	Wendell Fairbanks, Alliance	Chris Wilkinson, Alliance
Buffalo	John Schulte, Kearney	Gerry Jensen, Kearney
Butler	Victor Thoendel, David City	Jack Kaufmann, David City
Cass	R. R. Anderson, Nehawka	Glen K. Knosp, Elmwood
Cheyenne-Kimball-Deuel	James Thayer, Sidney	Clinton Dorwart, Sidney
Cuming		Gordon Moshman, West Point
Custer	Loren Jacobsen, Broken Bow	N. Leon Books, Broken Bow
Dawson		Rodney Sitorius, Cozad
Dodge	Rod Koerber, Fremont	W. B. Eaton, Fremont
Five	Willis L. Wiseman, Wayne	Robert Benthack, Wayne
Four	Tom Martin, Ord	Otis Miller, Ord
Gage	Alan Langvardt, Beatrice	Louis J. Gogela, Jr., Beatrice
Hall	L. W. Hake, Grand Island	Gordon Francis, Grand Island
Hamilton	M. D. Jobman, Aurora	G. D. Penner, Aurora
Holt & Northwest	Melvin Campbell, Ainsworth	John Bryd, Valentine
Jefferson	Gordon O. Johnson, Fairbury	R. A. Blatny, Fairbury
Knox	D. M. Laflan, Creighton	D. J. Nagengast, Bloomfield
Lancaster	C. L. Barton, Lincoln	M. A. Breiner, Lincoln
Lincoln	Dell Shepherd, North Platte	Timothy O'Holleran, North Platte
Madison	G. Tom Surber, Norfolk	C. Robert Adams, Norfolk
Metropolitan Omaha	Jerald R. Schenken, Omaha	F. F. Paustian, Omaha
Northeast	G. Tom Surber, Norfolk	C. Robert Adams, Norfolk
Northwest	Joel Hutchens, Gordon	R. H. Rasmussen, Chadron
Otoe	Dean R. Thomson, Nebraska City	Paul R. Madison, Nebraska City
Keith-Perkins-Chase	Berl W. Spencer, Ogallala	E. A. Holyoke, Ogallala
Platte-Loup Valley	Arthur Liebentritt, Columbus	Dwight Rickard, Columbus
Saline		Robert E. Tuma, Crete
Sarpy	Fred Gawecki, Papillion	Fred Schwartz, Papillion
Saunders	I. M. French, Wahoo	John E. Hansen, Jr., Wahoo
Scotts Bluff	Lowell Stratton, Mitchell	Vonn Roberts, Scottsbluff
Seward	Paul Plessman, Seward	Van Vahle, Seward
South Central	Jeff Hollins, Geneva	Chas. F. Ashby, Geneva
Southeast Nebr.	Gary Ens, Auburn	George Voigtlander, Pawnee City
Southwest Nebr.	David A. Allerheiligen, McCook	E. C. Beyer, McCook
Washington-Burt	H. Neal Sievers, Blair	K. C. Bagby, Blair
York	James D. Bell, York	Darroll J. Loschen, York

Physicians' Classified

Advertisements in this column are run at a rate of twenty cents per word with a minimum of \$10.00 per insertion. Copy must be received by the fifth of the month preceding the date of publication and should not exceed 50 words. Each advertisement will be taken out following its first appearance unless otherwise instructed. Where numbers follow advertisements, replies should be addressed in care of The Nebraska Medical Journal, 1512 First Tier Bank Building, Lincoln, NE 68508.

RADIOLOGISTS NEEDED: Progressive 5 physician group is seeking two radiologists to join its expanding practice in Upper Midwest. One position will assist the group in providing services to a large hospital and large multi-specialty clinic practice. Experience in all modalities is essential. The second position will provide general radiography, mammography and ultrasound for several small rural hospitals. Both positions offer attractive compensation and benefits along with the opportunity to practice in high-quality medicine. Submit CV and cover letter explaining expectations to Box #027, *Nebraska Medical Journal*, 1512 First Tier Bank Bldg., Lincoln, NE 68508.

FAMILY PRACTICE: North Platte, NE. Practice space available due to health problems. Excellent opportunity to associate with five board-certified physicians. Come to where the West begins! Call Gary L. Conell, M.D., 810 Reid, North Platte, NE 69101. Office 308-534-3222; Home 308-534-4109.

EXCELLENT OPPORTUNITIES FOR: Otorhinolaryngologist, Obstetrician/Gynecologist, Dermatologist, Psychiatrist, Endocrinologist, Radiologist, Orthopedist, and General/Family Practitioner. Excellent opportunity for physicians in Los Angeles suburb to join 80 member multispecialty medical group. Large fee-for-service and prepaid practice, no Medi-Cal. Excellent compensation program based on guarantee plus incentive, profit sharing and pension plan. Group provides health, dental, life and malpractice. Partnership in real estate and medical corporation available. See our Display Ad in this publication. Send CV to William Shaw, Associate Administrator, Mullikin Medical Center, 17821 S. Pioneer Blvd., Artesia, CA 90701.

FAMILY PRACTICE PHYSICIAN NEEDED: Established need for a family practice physician to join seven man group in beautiful Northwest Iowa. Modern 10,000 sq. ft. clinic building is next door to 72-bed JCAH accredited county hospital. Unusually progressive community of 10,000 has economy far above the state average. Storm Lake offers 3,000 acre lake, 85 acres of park and recreation, and is home to Buena Vista College. One hour from Sioux City, and two hours from Omaha & Des Moines. Generous guarantee with immediate incentive plan, paid malpractice insurance, liberal vacation and seminar time, limited call requirements with seven other physicians and no HMO's in the area. Contact Darrell Pritchard, Manager, Buena Vista Clinic, P.C., 620 Northwestern Drive, Storm Lake, IA 50588. Call collect 712-732-5030.

FAMILY PRACTICE PHYSICIAN, RANDOLPH: Enjoy the pleasures of small town living. Outstanding, well-established solo practice available July 1, to replace retiring family practice physician. Many attractive options available. Let us tell you more about one of Northeast Nebraska's best medical practices. Contact Pat Rogers, Randolph, NE 68771, (402) 337-0808.

WANTED: Internist wanted for progressive, affiliated VA Medical Center in Lincoln. Will be working primarily with acute care inpatients. Board certification preferred. Must meet English proficiency requirement. Licensure any state. Salary and bonus pay commensurate with training and experience. Equal Opportunity Employer. Write or call (402) 489-3802, Ext. 220, Chief, Medical Service, VA Medical Center, 600 South 70th, Lincoln, NE 68510.

FOR 2ND & 3RD FAMILY PRACTICE RESIDENTS: Need one or two F.P. for well established practice, also a general surgeon, ENT, and internist. Excellent schools and small university. Office is well equipped, as is the new 88-bed hospital. Silver City has year-around excellent climate, 6,000 ft. elevation, good hunting for deer, bear, lion, elk, etc., fishing and backpacking in the Gila National Forest and wilderness. Population of 12,000 plus 12,000 in drawing area. If interested call me collect, 1-505-538-9596 and we will set up a meeting in Lincoln or Silver City. Expenses paid for you. L. L. Anderson, 3505 Jack Frost Drive, Silver City, NM 88061.

FAMILY PRACTICE: BE/BC to join BC Internist in private practice, rural Nebraska. Guarantee and incentive first year, full partnership available after first year. Excellent schools and outdoor recreation. Modern hospital adjacent to office. Send CV or call: Melvin Campbell, M.D., 938 East Zero, Ainsworth, NE 69210, (402) 387-1900.

PHYSICIAN RETIRING: Successful Omaha physician with growing primary care and general surgery practice is preparing to retire. Future direction of the practice will depend on interest of new physician(s) who acquire ownership. Our client will remain in practice for one to three years on fulltime or parttime basis to assist with transition of existing patients to new physician(s), and to arrange introductions to hospital personnel, referring physicians. Sale terms are very flexible. If interested send curriculum vitae with letter describing your interests. Include after hours telephone number. Director inquiries to: Edmund J. Leslie, Leslie Associates, 200 Kiewit Plaza, 3555 Farnam, Omaha, NE 68131.

PHYSICIANS NEEDED: Family Practice and Internal Medicine physicians to join multipractice clinic in Watertown, S.D., a lake community of 17,000 located in eastern S.D. First year salary guarantee with paid malpractice and excellent fringe benefits. Please reply with CV to: Joel Frey, Administrator, Barton Clinic, P.C., 320 - 7th Ave., SE, Watertown, SD, 57201 or phone 605-886-8471.

YOUR ROCHE REPRESENTATIVE WOULD LIKE YOU TO HAVE SOMETHING THAT WILL ...

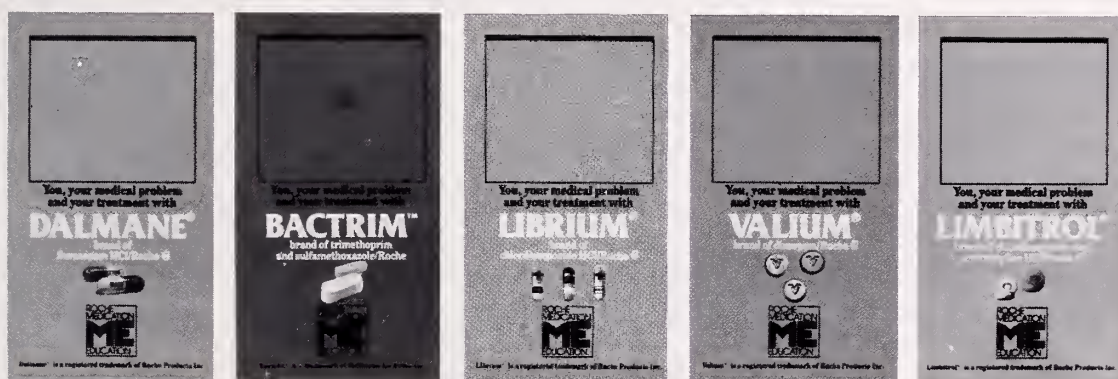


- ... improve patient satisfaction with office visits
- ... improve patient compliance with your instructions
- ... reduce follow-up calls to clarify instructions

The new Roche product books

- Offer a supplement to, not a substitute for, patient contact
- Support your specific instructions to the patient
- Provide a long-term reinforcement of your oral counseling

Because you are the primary source of medical information for your patients, we invite you to look over the Roche Product Booklets shown below and ask your Roche representative for a complimentary supply of those applicable to your practice.



Medicines that matter from people who care

COMMITTED TO EXCELLENCE



ROCHE
PRESIDENT'S
ACHIEVEMENT
AWARD

**Presenting
the winners of the 1987
Roche President's Achievement Awards**

LIBRARY
APR 16 1987
NEW YORK
OF MEDIC

Hoffmann-La Roche is pleased to honor these outstanding sales representatives, chosen for their unparalleled dedication to the health-care field, professionalism and consistent high level of performance. Please join us in congratulating these exceptional individuals.



John L. Yost



Turn to the preceding page and find out how your award-winning Roche representative can help both you *and* your patients.

THE NEBRASKA MEDICAL JOURNAL



119
Years



Contents

Editorial

- Artificial Intelligence and
Medical Decision Making **147**
Douglass A. Decker, M.D.

Original Articles

- "Drug Holiday" in Parkinson's Disease **149**
Anne Kenny
L. Charles Murrin
Ronald F. Pfeiffer

- Osteomyelitis of the Head and Neck **154**
Lyle W. Nelson, D.M.D.
Daniel D. Lydiatt, D.D.S., M.D.

- Taxonomy of Weight Loss Results
with Surgical Treatment **163**
Mieczyslaw Cegielski, M.D., F.A.C.S.
Sybil R. Faircloth, SRN (UK)
Jose A. Saporta, Sr., M.D., F.A.C.S.

- Nebraska Physicians' Infarct
Feeding Recommendation:
Kathleen G. Auerbach, Ph.D.
John Walburn, M.D.

Perinatal Page

- "The Use of Rh-Immune Globulin" **175**
J. Patrick Lavery, M.D.

Features

- President's Page **177**

- The Auxiliary **178**

- Letter to the Editor **179**

- Welcome New Members **180**

- In Memoriam **181**

- 182**

NEW YORK
2 EAST 103RD ST.
LIB-PERIODICALS DEPT
THE N.Y. ACADEMY OF MED.

H.M.S.S.

**The AMA
Hospital Medical Staff Section
Ninth Assembly**

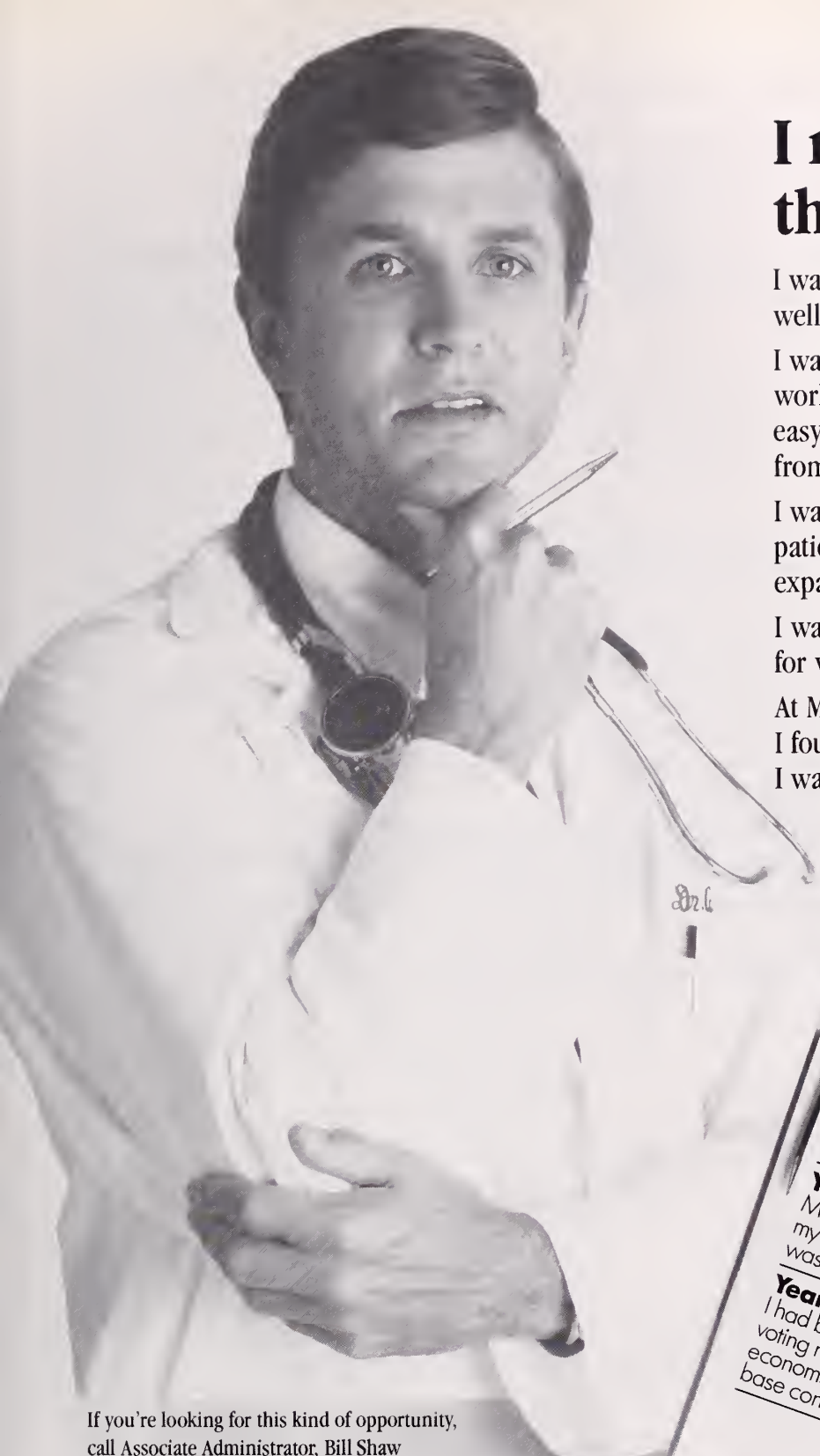
**JUNE 18-22, 1987
PALMER HOUSE
CHICAGO**

Represent your medical staff.

For Information Contact:

Department of Hospital Medical
Staff Services
American Medical Association
535 North Dearborn Street
Chicago, Illinois 60610
Phone (312) 645-4747 or 645-4753





I made the right choice.

I wanted a group that works well together.

I wanted a pleasant working environment in easy commuting distance from my home.

I wanted a built-in patient base, and an expanding practice.

I wanted to be rewarded for work well done.

At Mullikin Medical Centers,
I found everything
I was looking for.

JOHN CALDWELL MD

John W. Caldwell, M.D.

Week #1:

I joined and found a strong support group.

Year #1:

My compensations exceeded my guarantee. My patient base was expanding.

Year #2:

I had become a partner with voting rights and substantial economic benefits. The patient base continued growing.

If you're looking for this kind of opportunity, call Associate Administrator, Bill Shaw at 213-860-6611, or send Bill your curriculum vitae.

Mullikin Medical Centers
17821 South Pioneer Boulevard
Artesia, CA 90701

Now, the opportunity is yours.

See our classified ad in this publication.

Mullikin Medical Centers

California's neighborhood doctor for more than 25 years.

CLARKSON MEDICAL LECTURE SERIES



CURRENT TRENDS AND CONTROVERSIES IN SURGERY

Friday, May 8, 1987
8 a.m. to 5 p.m.

Clarkson Hospital Storz Pavilion

Featured speakers include: Robert K. Jarvik, M.D.
Thomas S. Riles, M.D.

Topics include:

The Artificial Heart

Breast Cancer: Diagnosis, Surgical Management,
Chemotherapy, Radiation Therapy, Reconstructive
Surgery

Carotid Artery Disease:
Diagnostic Evaluation & Surgical Management
Medical Management

Coronary Artery Disease - Medical Management

Coronary Angioplasty and "Medical" Interventions
in Acute Myocardial Infarction

Surgical Management

Workshops

8 C.M.E. and 8 A.A.F.P. credits
to be awarded.

Lecture Series courtesy of
Bishop Clarkson Memorial Hospital
Medical/Dental Staff
44th and Dewey Avenue
Omaha, NE 68105-1018

For more information call 402-559-3378

ORGANIZATIONS, NATIONAL

American Academy of Family Physicians
1740 West 92nd St., Kansas City, MO 64114

American Academy of Pediatrics
James E. Strain, M.D., Executive Director
141 Northwest Point Road, P.O. Box 927
Elk Grove Village, IL 60007

American Academy of Physician Assistants
F. Lynn May, Executive Vice President
1117 N. 19th St., 3rd Floor
Arlington, VA 22209

American Academy of Ophthalmology
Thomas P. Kearns, M.D., President
655 Beach Street, P.O. Box 7424
San Francisco, CA 94120-7424

American College of Emergency Physicians
Colin C. Rorrie, Jr., Ph.D., Exec. Director
Box 619911, Dallas, TX 75261-9911

American College of Legal Medicine
Miss Betty Hanna, Executive Secretary
213 W. Institute Place, Ste. 412, Chicago, IL 60610

American College of Obstetricians & Gynecologists
Warren H. Pearce, M.D., Executive Director
600 Maryland Avenue SW, Ste. 300 E
Washington, D.C. 20024

American College of Physicians
John R. Ball, M.D., F.A.C.P., Exec. Vice President
4200 Pine St., Philadelphia, PA 19104

American College of Radiology
John J. Curry, Executive Director
1891 Preston White Drive, Reston, VA 22091

American College of Surgeons
C. Rollins Hanlon, M.D., Director
55 East Erie St., Chicago, IL 60611

American Diabetes Association, Inc.
Robert S. Bolan, Exec. Vice President
1660 Duke Street, Alexandria, VA 22314

American Heart Association National Center
Mr. Dudley Hafner, Exec. Vice President
7320 Greenville Avenue, Dallas, TX 75231

American Hospital Association
Carol M. McCarthy, Ph.D., J.D., President
840 North Lake Shore Dr., Chicago, IL 60611

American Medical Association
James H. Sammons, M.D., Exec. Vice President
535 North Dearborn St., Chicago, IL 60610

American Society of Anesthesiologists
Mr. J. W. Andes, Executive Secretary
515 Busse Hwy., Park Ridge, IL 60068

American Society of Clinical Pathologists
Robert A. Dietrich, M.D., Chief Executive
2100 W. Harrison St., Chicago, IL 60612

American Society of Internal Medicine
Joseph F. Boyle, M.D., Exec. Vice President
1101 Vermont N.W., Ste. 500, Washington, D.C. 20005

American Urological Association, Inc.
Mr. Richard J. Hannigan, Executive Secretary
1120 No. Charles St., Baltimore, MD 21201

Arthritis Foundation
Clifford M. Clarke, C.A.E., President
1314 Spring St., N.W., Atlanta, GA 30309

International College of Surgeons
F. C. Ottati, M.D., Int. Sec. General
1516 North Lake Shore Dr., Chicago, IL 60610

National Rehabilitation Association
633 S. Washington St. Alexandria, VA 22314

Radiological Society of North America
James J. McCort, M.D., President
1415 W. 22nd St., Oak Brook, IL 60521

South Central Section of the American
Urological Association, Inc.
Henry Kammandel, M.D., Past President
8300 Dodge St., Ste. 407, Omaha, NE 68114

The Nebraska Medical Journal

VOL. 72, NO. 5

MAY 1987

EDITOR —

ALAN D. FORKER, M.D.
5505 Ellendale Road,
Lincoln, NE 68510

Associate Editors:

Deepak M. Gangahar, M.D., Lincoln
Charles S. Wilson, M.D., Lincoln

Editorial Board:

James O. Armitage, M.D., Omaha
Rodney S.W. Basler, M.D., Lincoln
Jehangir B. Bastani, M.D., Lincoln
John H. Casey, M.D., Lincoln
Paul E. Collicott, M.D., Lincoln
John F. Connolly, M.D., Omaha
Douglass Decker, Jr., M.D., Lincoln
Robert W. Gillespie, M.D., Lincoln
Stephen R. Grenier, M.D., Lincoln
Bruce D. Gutnik, M.D., Omaha
Roger Harned, M.D., Omaha
Edward A. Holyoke, Jr., M.D., Ogallala
Sushil S. Lacy, M.D., Lincoln
Hal K. Mardis, M.D., Omaha
Gilles R. G. Monif, M.D., Omaha
Walter J. O'Donohue, M.D., Omaha
William F. Rayburn, M.D., Omaha
John L. Reed, M.D., Lincoln
Jerald R. Schenken, M.D., Omaha
Kenton L. Shaffer, M.D., Kearney
Harlan C. Shriner, Jr., M.D., Lincoln
Patricia Cole Stivins, M.D., Lincoln
Harold W. Thaut, M.D., Beatrice
Jon S. Thompson, M.D., Omaha
William L. Vosik, M.D., Kearney
Arthur Weaver, M.D., Lincoln



SUBSCRIPTION RATE

\$18.00 Per Year U.S.
\$18.00 Per Year Foreign Country
Single Copies \$1.50 Each

Copyright © 1987 Nebraska Medical Association. Information concerning reprints of the articles in this Journal and concerning obtaining permission for the reproduction of any portion of this Journal may be obtained from the Editor.

The Nebraska Medical Journal does not assume responsibility for statements made or opinions expressed by the authors. Products and services advertised are neither endorsed nor warranted by the Nebraska Medical Association. The Nebraska Medical Journal reserves the right to accept or reject advertising copy.

Published monthly and Second-Class Postage paid at Lincoln, Nebraska and at additional mailing offices (ISSN 0091-6730)

Address all correspondence relating to subscriptions, advertising or address changes to William L. Schellpeper, Business Manager, 1512 First Tier Bank Building, Lincoln, Nebraska 68508. Phone (402) 474-4472.

EDITORIAL —

Artificial Intelligence and Medical Decision Making 147
Douglass A. Decker, M.D.

ORIGINAL ARTICLES —

"Drug Holiday" in Parkinson's Disease..... 149

Anne Kenny
L. Charles Murrin
Ronald F. Pfeiffer

Osteomyelitis of the Head and Neck 154

Lyle W. Nelson, D.M.D.
Daniel D. Lydiatt, D.D.S., M.D.

Taxonomy of Weight Loss Results with Surgical Treatment..... 163

Mieczyslaw Cegielski, M.D., F.A.C.S.
Sybil R. Faircloth, SRN (UK)
Jose A. Saporta, Sr., M.D., F.A.C.S.

Nebraska Physicians' Infant Feeding Recommendations 168

Kathleen G. Auerbach, Ph.D., I.B.C.L.C.
John Walburn, M.D.

PERINATAL PAGE —

"The Use of Rh-Immune Globulin"..... 175
J. Patrick Lavery, M.D.

FEATURES —

President's Page 177

The Auxiliary..... 178

Letter to the Editor..... 179

Welcome New Members 180

In Memoriam..... 181

Coming Meetings..... 182

Since 1925

Nebraska's Leading Physicians and Surgical Supply House

Phone 474-3222



**DONLEY MEDICAL
SUPPLY COMPANY**

P.O. Box 83108, Lincoln, NE 68501
AUTHORIZED CONTRACT AGENT

REPRINTS

OF YOUR

Technical Articles

Are a direct presentation of research
and a valuable supplement
to any doctor's library.



It costs very little
to run reprints —
write us for prices

Norfolk Printing Co., Inc.

118 North Fifth
NORFOLK, NEBRASKA 68701

Letterheads - Statements
Envelopes - Office Forms
Quality Printing at the Right Price

ADVICE TO AUTHORS

Manuscripts should be submitted in duplicate to the Editor at the following address: Alan D. Forker, M.D., 5505 Ellendale Road, Lincoln, Nebraska 68510. The manuscript should be typewritten, double-spaced, on 8½ x 11 in. paper, with generous margins on each page. Number all pages in the right upper corner with the author's surname.

Review articles will be considered, and should generally be limited to less than 4,000 words and approximately 30 references.

Manuscripts describing original clinical or laboratory research should be limited to 2,000 words and approximately 20 references.

Acknowledgements must be given when material from other publications is included. Provide names of authors, title of article, title of journal or book, volume number, pages, month and year, and publisher's permission to reprint.

Always send a covering letter or letter of transmittal with each manuscript, and refer to the manuscript by its title, in the letter and all correspondence. Do not send a manuscript that was published elsewhere.

Title page: each manuscript should have a title page, including the full name, academic degree, and hospital or university affiliation of each author. A name and address for reprint requests should be included on the title page, including street address, city, state, and zip code.

Summary for article: all major scientific articles should be accompanied by a summary at the end of the article, summarizing the key information and recommendations presented.

References: should be listed in the order in which they appear in the article and should be typed double-spaced. Authors are responsible for the completeness and accuracy of all cited references. Journal references should include authors' names and initials, title of article, abbreviated name of Journal (as listed in Index Medicus), volume number, inclusive pages, and year of publication. References to books should include authors, title, location and name of publisher, year of publication, edition, and page numbers.

Tables and illustrations: should be typed double-spaced on separate sheets of 8½ x 11 in. paper. Each Table should have a title. Illustrations should be prepared professionally and submitted as high-quality, glossy, unmounted black-and-white photographic prints, at least 5 x 7 in. Do not send original artwork. Each illustration should be consecutively numbered and cited in the text. Each photograph should have a gummed label on the back containing the figure number, name of senior author and an arrow indicating top of figure. Legends should be typed double-space for each illustration. Permission to reproduce a picture of a patient is needed, if such a picture is included.

Letters-to-the-Editor: letters are encouraged by all readers and will be published as space permits and at the discretion of the Editor. All letters should be accompanied by the notation: For publication. Galley proofs generally will not be returned to the authors pre-publication.

Manuscripts will be published in the order in which they are received, particularly in the order in which galley proofs are returned from the authors. The Editor of this Journal assumes no responsibility for opinions and claims expressed in an article published in this Journal.

Reprints should be ordered from the printer, Norfolk Printing Company, Inc., P.O. Box 278, Norfolk, Nebraska 68701.

To show you how many
hypertensives stayed on

INDERAL[®] LA
(PROPRANOLOL HCl)

after a major nationwide trial...



...we had
to find
just the
right room.



60,073 patients (90%) who started on INDERAL LA stayed on INDERAL LA.^{1*}

Surprising? Not really.

Because most patients on INDERAL LA (propranolol HCl) don't even know it's working.

A recent double-blind, placebo-controlled, crossover study in 138 hypertensive patients² revealed that INDERAL LA has a side effects profile unsurpassed by atenolol or metoprolol — which shows how well-tolerated once-daily INDERAL LA can be.

Sole therapy or concomitant therapy?

Fifty-nine percent of the time, INDERAL LA stood on its own.

The patients in the nationwide compliance trial were no different from yours. Generally when the antihypertensive regimen is complicated, compliance may become a problem. So, the effectiveness of INDERAL LA as once-daily monotherapy is a big plus. Of the remaining hypertensives in the program, 36% were treated merely with the addition of a diuretic to INDERAL LA.

For the noncompliant patients in your practice, INDERAL LA may well be the answer.

Almost 20,000 of the patients in the nationwide compliance trial were identified as having been noncompliant with their previous antihypertensive therapy. Their physicians reported that 88% showed improved compliance when placed on once-daily INDERAL LA.

Control, comfort, and compliance

ONCE-DAILY
INDERAL[®] LA
(PROPRANOLOL HCl) **LONG ACTING CAPSULES**

Like conventional INDERAL Tablets, INDERAL LA should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree, and bronchial asthma.

^{*}After a 30-day trial with INDERAL LA, physicians reported that 90% of the patients would remain on INDERAL LA.

The one you know best keeps looking better

Please see next page for brief summary of prescribing information

N O W A V A I L A B L E . . .
NEW LOW DOSE
INDERAL[®] LA 60 mg
(PROPRANOLOL HCl) **LONG ACTING CAPSULES**

The one you know best keeps looking better

BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR)

INDERAL® LA (brand of propranolol hydrochloride) (Long Acting Capsules)

DESCRIPTION. Inderal LA is formulated to provide a sustained release of propranolol hydrochloride. Inderal LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. Inderal is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by Inderal, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

Inderal LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with Inderal LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period, the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of Inderal Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

Inderal LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to Inderal LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, Inderal LA has been therapeutically equivalent to the same mg dose of conventional Inderal, as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. Inderal LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. Hypertension: Inderal LA is indicated in the management of hypertension. It may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. Inderal LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: Inderal LA is indicated for the long-term management of patients with angina pectoris.

Migraine: Inderal LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: Inderal LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. Inderal LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. Inderal is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first-degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with Inderal.

WARNINGS. CARDIAC FAILURE. Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or Inderal should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of Inderal therapy. Therefore, when discontinuance of Inderal is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If Inderal therapy is interrupted and exacerbation of angina occurs, it is usually advisable to reinstitute Inderal therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema) — PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. Inderal should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY. The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

Inderal (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA. Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS. Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T_4 and reverse T_3 , and decreasing T_3 .

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case, this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL. Propranolol should be used with caution in patients with impaired hepatic or renal function. Inderal (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should

be told that Inderal may interfere with the glaucoma screening test. Withdrawal may lead to return of increased intraocular pressure.

CLINICAL LABORATORY TESTS. Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS. Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if Inderal is administered. The added catecholamine blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenyltoin, phenobarbital, and rifampin accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

Antipyrine and lidocaine have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T_3 concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY. Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 1-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY. Pregnancy Category C. Inderal has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. Inderal should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS. Inderal is excreted in human milk. Caution should be exercised when Inderal (propranolol HCl) is administered to a nursing woman.

PEDIATRIC USE. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular. Bradycardia, congestive heart failure, intensification of AV block, hypotension, paresthesia of hands, thrombocytopenic purpura, arterial insufficiency, usually of the Raynaud type.

Central Nervous System. Light-headedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to cataplexy, visual disturbances, hallucinations, vivid dreams, an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy and vivid dreams appear dose related.

Gastrointestinal. Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic. Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory. Bronchospasm.

Hematologic. Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune. In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous. Alopecia, LE-like reactions, psoriasisiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSEAGE AND ADMINISTRATION. Inderal LA provides propranolol hydrochloride sustained-release capsule for administration once daily. If patients are switched from Inderal Tablets to Inderal LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. Inderal LA should not be considered a simple mg-for-mg substitute. Inderal LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION — Dosage must be individualized. The usual initial dosage is 80 mg Inderal LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood-pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 6 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS — Dosage must be individualized. Starting with 80 mg Inderal LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value of safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE — Dosage must be individualized. The initial oral dose is 80 mg Inderal LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is obtained within four to six weeks after reaching the maximal dose, Inderal LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS — 80-160 mg Inderal LA once daily.

PEDIATRIC DOSAGE. At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

REFERENCES:

1. Inderal LA National Compliance Evaluation Program. Data on file, Ayerst Laboratories.
2. Ravid M, Lang R, Jutrin I. The relative antihypertensive potency of propranolol, oxprenolol, atenolol, and metoprolol given once daily. *Arch Intern Med* 1985; 145:1321-1323.

R 7119 5

Ayerst

AYERST LABORATORIES
New York, NY 10017

© 1987 Ayerst Laboratories

AUTOMATED MEDICAL OFFICE SYSTEMS

UNISYS

The Power of ²

Announcing the merger of two great computer companies, BURROUGHS and SPERRY. **UNISYS** is derived from three words – UNITED, INFORMATION, SYSTEMS.

UNISYS now has over 60,000 installations in virtually every line of business. **UNISYS** offers a combined heritage in solving business problems totaling nearly 200 years.

We have dedicated ourselves at **UNISYS** to retaining the position we now hold as the number one computer company in the area of customer satisfaction.¹

¹ Data Pro 1985, 1986

PLUS + + MEDICAL COMPUTER MANAGEMENT

Major Components include:

- Patient Registration
- Patient Accounting
- Accounts Receivable
- Appointment Scheduling
- Collection Agency Accounting
- Medical Records
- Report Generator



Customer Services Include:

- Education and Training
- Installation Support
- Consulting Services
- Strategic Planning
- Marketing Consultation
- User Meetings
- Software Enhancements

For more information please clip and send this request form to

UNISYS CORPORATION

or call (402) 330-5395

10810 Farnam Drive

Attention; Beverly Schott

Omaha, NE 68154

Clinic Name _____

Contact Name _____

Address _____

City, State, Zip _____

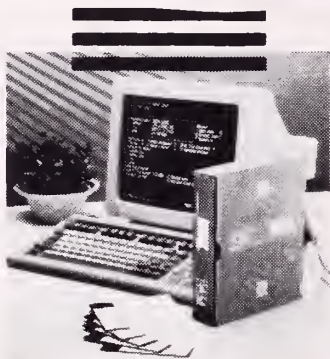
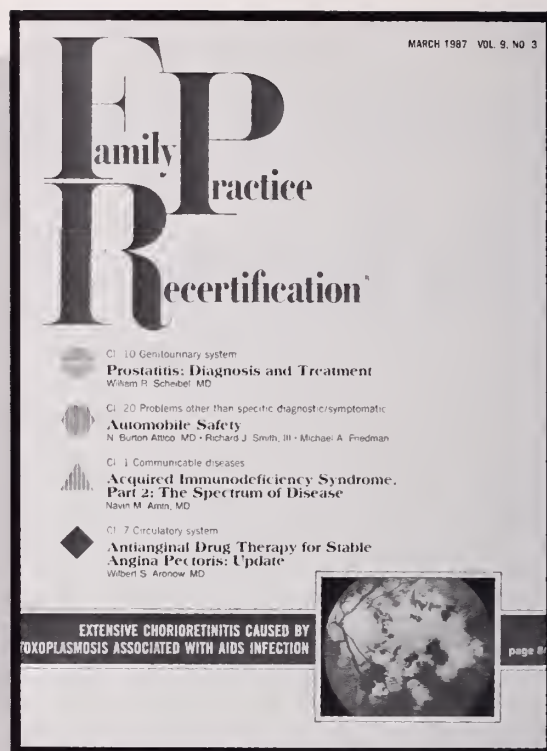
Phone _____

The complete journal for family practice physicians

- Reaches 79,000 family physicians monthly
- Presents the most commonly seen patient problems in family practice
- Written by physicians for physicians
- The most current clinical updates in:

Cardiology	Ob/Gyn
Diabetes	Psychiatry
Pediatrics	Gastroenterology
- Provides 20 hours of CME Category 1 Credit

PRACTICAL • CLINICAL • EDUCATIONAL • CURRENT



Physicians who have thoroughly investigated their choices are selecting MDX* medical data software.

MDX

*MDX is a trademark of Calyx, Inc.

Call us about the multi-user, multi-tasking MDX system. We will send you a video tape presentation.



INFO-BUILDERS, INC.

402/331-2546
11203 JOHN GALT BOULEVARD
OMAHA, NEBRASKA 68137

Providing complete installation, training and support services.

AMA News Notes

One to two percent of automotive fatalities may be related to a medical condition exclusive of alcohol intoxication. With more than 150 million drivers in the United States, physicians are certain to encounter patients in their practices who need advice about driving in spite of their medical conditions.

"Medical Conditions Affecting Drivers" is a publication that provides recommendations for physicians about the medical qualifications of drivers. Subjects include guidelines relating to patients having diabetes, epilepsy, coronary artery disease, visual and hearing impairments, musco-skeletal abnormalities, alcohol and other drug problems, psychiatric conditions, and more.

This 86-page book contains up-to-date references and a valuable index. To order call the AMA toll-free at (800) 621-8335, in Illinois call collect (312) 645-4987. The price is \$15 for AMA members, \$37.50 for non-members.

* * *

Motrin[®] 800 TABLETS mg

ibuprofen



Extra strength
Convenience
Economy



A Century
of Caring
1886-1986

ANNOUNCING NEW

Keflet™ TABLETS cephalexin

All the advantages of cephalexin in a convenient tablet form

- Backed by over 15 years of clinical experience
- Smaller tablet is specially shaped and coated for easier swallowing
- May enhance patient compliance, particularly among the elderly
- Tablet dosage form may be appreciated by patients of all ages

NEW Keflet Tablets are available as:

250-mg
Tablets



500-mg
Tablets

Keflet is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-sensitive patients.

Brief Summary. Consult the package literature for prescribing information.
Indications and Usage: Keflet™ Tablets (cephalexin, Dista) are indicated for the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Respiratory tract infections caused by *Streptococcus pneumoniae* and group A β hemolytic streptococci (Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. Keflet is generally effective in the eradication of streptococci from the nasopharynx; however, substantial data establishing the efficacy of Keflet in the subsequent prevention of rheumatic fever are not available at present.)

Otitis media due to *S. pneumoniae*, *Haemophilus influenzae*, staphylococci, streptococci, and *Nisseria catarrhalis*

Skin and skin-structure infections caused by staphylococci and/or streptococci

Bone infections caused by staphylococci and/or *Proteus mirabilis*, *Genitourinary tract infections*, including acute prostatitis, caused by *Escherichia coli*, *P. mirabilis*, and *Klebsiella sp.*

Note—Culture and susceptibility tests should be initiated prior to and during therapy. Renal function studies should be performed when indicated.

Contraindication: Keflet is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: BEFORE CEPHALEXIN THERAPY IS INSTITUTED, CAREFUL INQUIRY SHOULD BE MADE CONCERNING PREVIOUS HYPERSENSITIVITY REACTIONS TO CEPHALOSPORINS AND PENICILLIN. CEPHALOSPORIN C DERIVATIVES SHOULD BE GIVEN CAUTIOUSLY TO PENICILLIN SENSITIVE PATIENTS.

SERIOUS ACUTE HYPERSENSITIVITY REACTIONS MAY REQUIRE EPINEPHRINE AND OTHER EMERGENCY MEASURES.

There is some clinical and laboratory evidence of partial cross-allergenicity of the penicillins and the cephalosporins. Patients have been reported to have had severe reactions (including anaphylaxis) to both drugs.

Any patient who has demonstrated some form of allergy, particularly to drugs, should receive antibiotics cautiously. No exception should be made with regard to Keflet.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins); therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening.

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis.

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile*. Other causes of colitis should be ruled out.

Usage in Pregnancy—Safety of this product for use during pregnancy has not been established.

Precautions: *General*—Patients should be followed carefully so that any side effects or unusual manifestations of drug idiosyncrasy may be detected. If an allergic reaction to Keflet occurs, the drug should be discontinued and the patient treated with the usual agents (eg, epinephrine or other pressor amines, antihistamines, or corticosteroids).

Prolonged use of Keflet may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Keflet should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

Indicated surgical procedures should be performed in conjunction with antibiotic therapy.

As a result of administration of Keflet, a false positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinistest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy—Pregnancy Category B—The daily oral administration of cephalexin to rats in doses of 250 or 500 mg/kg prior to and during pregnancy, or to rats and mice during the period of organogenesis only, had no adverse effect on fertility, fetal viability, fetal weight, or litter size. Note that the safety of cephalexin during pregnancy in humans has not been established.

Cephalexin showed no enhanced toxicity in weanling and newborn rats as compared with adult animals. Nevertheless, because the studies in humans cannot rule out the possibility of harm, Keflet should be used during pregnancy only if clearly needed.

Nursing Mothers—The excretion of cephalexin in the milk increased up to 4 hours after a 500-mg dose; the drug reached a maximum level of 4 µg/mL, then decreased gradually, and had disappeared 8 hours after administration. Caution should be exercised when Keflet is administered to a nursing woman.

Adverse Reactions: *Gastrointestinal*—Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely. The most frequent side effect has been diarrhea. It was very rarely severe enough to warrant cessation of therapy. Dyspepsia and abdominal pain have also occurred. As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.

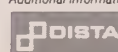
Hypersensitivity—Allergic reactions in the form of rash, urticaria, angioedema, and, rarely, erythema multiforme, Stevens-Johnson Syndrome, or toxic epidermal necrolysis have been observed. These reactions usually subsided upon discontinuation of the drug. Anaphylaxis has also been reported.

Other reactions have included genital and anal pruritus, genital moniliasis, vaginitis and vaginal discharge, dizziness, fatigue, and headache. Eosinophilia, neutropenia, thrombocytopenia, and slight elevations in SGOT and SGPT have been reported.

PV 2211 DPP

(111786)

Additional information available to the profession on request from



Dista Products Company
Division of Eli Lilly and Company
Indianapolis, Indiana 46285
Mfd by Eli Lilly Industries, Inc.
Carolina, Puerto Rico 00630

THE NEBRASKA MEDICAL JOURNAL

Artificial Intelligence and Medical Decision Making

THE most popular "buzz word" in computer science in the last decade has been artificial intelligence. Despite the frequent references to this popular subject, there has still been no consensus opinion on its definition. To many, the goal has been to design a machine which "thinks" like a human. This is a particularly difficult concept since so little is known about how the human thinks. Somewhere in this philosophy is the concept of reasoning; the ability to draw analogies; the ability to solve entirely new problems by utilizing skills learned in solving previous problems.

In most cases, the goals are much more limited. The idea is to precisely define all the possible parameters of a subject and to formulate structured rules regulating how they interact. This approach has been called decision making. Edward A. Feigenbaum, one of the pioneers in the application of artificial intelligence systems to medicine, in his recent keynote address to the 1986 MedInfo conference,¹ stated that the key to artificial intelligence is knowledge. In order to be effective, current expert systems depend on a vast carefully-analyzed system of medical facts to be successful. The more accurate and more numerous the facts, the better the system will perform.

A hypothetical analysis of such a system might be helpful. Let's suppose we wish to design a system which will assist a physician in his decision making regarding proper treatment of a T.I.A. The system will demand that all the necessary historical and physical data is available so that the area of brain ischemia can be defined. All of the necessary medical knowledge of the patient's health will be known so that cardiac, hematological, blood pressure, sociological and psychological factors will be understood. Additional information such as Doppler and angiographic data may be requested. All of these essential facts will be

DOUGLASS A. DECKER, M.D.

analyzed by a program which knows all of the precise risks and benefits of all possible treatment options. The "obvious" choice of treatment is then revealed. Anyone dealing with real patients in the real world will rapidly understand that all of the medical "facts" are not known, and even the facts themselves may be open to various interpretations. Even in the most ideal environment where all the facts are known, it is very difficult, if not impossible, to find the precise risk values to utilize in the final computation. Medical literature is often a wasteland of markedly conflicting data. A more realistic system will recognize these limitations and will simply offer some assistance based on the best available information. It is obvious that the usefulness of such decision assistance is directly related to the reliability of the data available. Thus, the comment that knowledge is the key.

Does that mean that these decision assisting programs have no usefulness? Of course not. I intentionally chose a medical problem in which facts are particularly difficult to find. There are other examples, such as the choice of antibiotics in a bacterial infection, where many more hard facts are available and where outcomes can be more precisely defined. In the most trivial examples computerized assistance would be a useless redundancy but, in more complex situations, some assistance in the choice of the best therapy might be useful and lead to improved medical care.

As a general principal, the more restricted and better defined the medical problem, the more competent the advice. The most suc-

cessful applications of expert systems, up until now, have been in the implementation of carefully designed protocols in specific disease states, such as oncology. Although strides are being made in the production of diagnostic and treatment systems to include the entirety of medicine, it is not clear that these are nearly as competent as the careful well trained clinician and may function best as reminder lists to insure that some reasonable possibility has not been inadvertently excluded from consideration.

There are some grave warnings which I believe must be tendered to all physicians and the public in general. We have become such a machine and technology dependent society that there may be a tendency to consider a decision "rendered" by the computer as "the" answer to a medical problem. It has always been difficult for physicians to unlearn something which was previously thought to be true but is now known to be false. When false "facts" become codified in a medical decision system, correcting the errors may be even more difficult. In an era where peer review and standards of care have become so important, we must be cautious that canned computerized decisions do not take precedence over competent clinical judgment. Similarly, it behooves any clinician who relies on expert computer systems to solve his clinical problems, to fully understand the implied "facts" that the program is using to make these judgments and be able to override the inevitable errors just as he now must know when to question an unreasonable lab result. Only the human mind

is currently able to reason and that must still be the ultimate decision maker.

It would be impossible to leave a discussion of computerized medical decision making without mentioning the medical-legal problems which will be involved. If a physician uses the assistance of an expert system and comes up with the wrong diagnosis or treatment, who is to blame? We may be sure that both the physician and the developer of the system will be at risk. This legal jeopardy will probably be a significant deterrent to the implementation of such systems even in the areas where they might be most useful. Multiple disclaimers will undoubtedly accompany all systems as they become commercially available but will probably have little validity in the courts.

The field of medicine has long been considered to be one of the most complex arenas in which the human mind competes. It is not surprising, therefore, that this holds a special fascination for those who are trying to design the machine which can think like a human. It is inevitable that a symbiosis² between machine and physician will hold a key place in future medicine but the physician, above all, must be cognizant of the strengths and weaknesses of each.

References

1. Proceedings of The Fifth Conference on Medical Informatics, North Holland - 1986 XLiii pp 2-295.
2. Proceedings of The Tenth Annual Symposium on Computer Applications in Medical Care. The Computer Society of the IEEE, 1986, pp 11-65.

"Drug Holiday" in Parkinson's Disease

ONE out of every one hundred individuals over age 65 suffers from Parkinson's disease.¹ The mainstay of current management is levodopa, treatment which is palliative and does not prevent disease progression. The long term management of Parkinson's disease may be complicated in more than 50% of treated individuals by the development of loss of responsiveness to levodopa, wide fluctuations in motor performance and psychiatric dysfunction.² Possible mechanisms for these processes include desensitization (down-regulation) of post-synaptic dopamine receptors following prolonged levodopa administration,³ disease progression,^{4, 6} accumulation of metabolites⁵ or pharmacokinetic changes involving levodopa, particularly its absorption.^{6, 7}

In untreated Parkinson's disease, post-synaptic dopamine receptors develop a compensatory "denervation supersensitivity" characterized by an increase in receptor number. Post-mortem studies of patients treated with levodopa demonstrate a reversal of this receptor supersensitivity.^{8, 9} Since it has been hypothesized that "denervation supersensitivity" is important in the therapeutic efficacy of levodopa,⁸ mechanisms have been sought to re-establish this condition. One idea that has been investigated is the use of a "drug holiday" or withdrawal of levodopa from patients for a short period of time. It has been suggested that this may allow the return of "denervation supersensitivity" and so increase the efficacy of levodopa therapy.¹¹ However, during the drug free period, parkinsonian signs and symptoms reappear in full force. Because of the complications and discomfort associated with return of these symptoms, the use of drug holidays has been controversial.

Literature Review

Sweet first noted enhanced responsiveness to levodopa after transient withdrawal of the drug in two patients.¹⁰ Subsequent evaluation of 13 patients in whom drug therapy was stopped for 4-11 days (average 7) demonstrated marked deterioration of motor function during drug withdrawal. At the end of the

ANNE KENNY
L. CHARLES MURRIN
RONALD F. PFEIFFER

The Department of Neurology and Pharmacology,
University of Nebraska Medical Center, 42nd & Dewey
Avenue, Omaha, Nebraska 68105.

withdrawal period, each patient was given a single 900 mg. dose of levodopa and seven of the 13 "dramatically" responded, performing motor tests as well as when receiving chronic treatment. Six did not respond significantly to the single dose. Long term response was not reported.

Direnfeld et al. studied nine patients retrospectively following levodopa holiday during which levodopa was stopped for 4-21 days (average 10.7).¹¹ Functional impairment in walking and activities of daily living were compared before and after the holiday. All patients experienced an increase in parkinsonian symptoms during the holiday. Complications included dehydration, thrombophlebitis and depression. Improvement was noted in both gait and activities of daily living in all patients following levodopa reinstitution. Four months after discharge, improvement was maintained in six patients on reduced dosage while in three, dosage increases had been necessary. When these six patients were assessed at one year, improvement was maintained in four, who continued on their discharge dose. One patient had returned to his pre-holiday dose and the last died of cardiac disease.

Weiner et al. studied 16 patients who either were experiencing loss of efficacy or had dose limiting adverse effects.¹² The patients' usual levodopa dose was reduced by half for "several days" and then stopped completely for 5-7 days. Patients were evaluated for parkinsonian signs, functional disability and levodopa-induced adverse effects before and after

holiday and during all drug manipulations. Symptoms increased in all patients during the holiday. Average disability scores significantly improved from pre-holiday levels when levodopa was reinstituted. The immediate post-holiday scores were similar to those obtained before the holiday but were achieved at a levodopa dosage that was half the patients' previous dosage. Eleven of the 16 patients remained on the post-holiday dosage throughout the observation period with significant improvement in their parkinsonism. Reduction of functional disability and levodopa-induced adverse effects, most notably psychiatric complications, was also noted.

Koller et al. followed 14 of the 16 patients from the study by Weiner.¹³ The two patients not included were "non-responders". Patients were evaluated at 3, 6, 9 and 12 months post-holiday. Evaluation at 3 and 6 months demonstrated no significant difference from post-holiday scores although a trend toward deterioration was apparent. At 9 months significant deterioration appeared. By 12 months only rigidity was still improved. Drug dosage remained lower than pre-holiday levels in 3 patients. Two patients were readmitted for another drug holiday because of loss of drug efficacy. Four of the six patients who experienced psychiatric symptoms prior to holiday remained free of these effects at one year. The "on-off" phenomenon reemerged in one of two patients and dyskinesia returned in both patients in which it had improved post-holiday.

Kofman studied the effects of levodopa holiday on 24 patients.¹⁴ A total of 31 holidays were assessed; one person underwent 3 holidays and five underwent 2. All were experiencing loss of drug efficacy and some were also experiencing complications such as the "on-off" phenomenon, dyskinesia and psychiatric symptoms. Levodopa was tapered over a few days and complete drug holiday lasted 7-14 days. When dopamine agonists were reinstituted, they were given at half the pre-holiday dose. Improvement for 6 months or longer occurred in 14 of the 24 patients and 15 of the 31 holidays. Six patients maintained improvement for more than one year, two patients had no response to the holiday and 14 had relapses in the first six months. In all patients motor function showed the most reliable improvement with 14 of the 15

improving after holiday. "On-off" episodes cleared in only 3 of 19 patients for over 6 months and 2 of 6 patients were free of hallucinations for over 6 months. There was no long term relief from dyskinesia.

Mayeux et al. retrospectively examined 28 patients after a 10 day drug holiday and compared them to 30 similar patients who did not undergo a drug holiday.¹⁵ The groups were not significantly different in age, duration of illness or dopamine agonist requirements. Twenty-two signs and symptoms of Parkinson's disease and independence in activities of daily living were evaluated. The groups were compared before the holiday, 6 months post-holiday and 12 months post-holiday. The severity of parkinsonian symptoms increased equally in both groups over the year of observation. Functional independence also deteriorated comparably in both groups over the year. The amount of levodopa taken by the patients was equivalent in both groups before the drug holidays. Although the group undergoing the holiday was taking 50% of their prior dose immediately post-holiday, dosage was again equivalent in the groups at 6 and 12 months. Complications during the drug holidays included a patient who suffered a pulmonary embolus, two with severe rigidity requiring parenteral nutrition and single patients with urinary tract infection, hypotension, transient psychosis, dystonic leg cramps and repeated falls. No similar complications occurred in the control group. Following drug-holiday, dyskinesia, psychiatric symptoms and motor performance fluctuations were comparable in the two groups.

Kaye and Feldman studied 45 patients who underwent drug holiday because of loss of levodopa efficacy and disabling levodopa-induced adverse effects.¹⁶ The holidays were 7-30 days (average 13.4) in duration. Patients were evaluated for functional status and adverse effects before the holiday and at 1, 6, 12 and 24 months after the holiday. Forty patients showed progressive emergence of severe parkinsonian symptoms while on the holiday and required full nursing care; five patients required only minimal assistance. Complications included 3 cases of aspiration pneumonia and a case of neuroleptic malignant-like syndrome. Levodopa was reinstituted and dosage was titrated to a level of function

comparable to pre-holiday scores, but the previously present adverse effects did not reappear. Bromocriptine was added to the regimen at 12 months if adequate response was not seen on 250 mg. of levodopa/day. At one month, functional improvement was noted in 24 of 45 patients while 20 had not improved and one was worse. At 6 months, 27 of 45 patients had improved, 16 remained unchanged and 2 had deteriorated. At 12 months, 35 patients were available for follow-up. Three of the 35 showed continued improvement, 23 were unchanged and 9 had worsened. At 24 months, 2 of 25 patients available for follow-up remained improved, 17 unchanged and six had worsened. The most severely impaired prior to drug holiday showed the greatest functional improvement in response to the holiday. Adverse effects of levodopa therapy returned in 2 of 45 patients at one month, 7 of 45 at 6 months, 6 of 35 at 12 months and 4 of 25 at 24 months. The type of adverse effects encountered varied and no particular levodopa-induced adverse effect constantly showed improvement.

Modifications of the drug holiday have been attempted. Goetz et al. studied a group of 17 patients who stopped dopaminergic medication for 2 consecutive days each week.¹⁷ Eight of the patients could not tolerate the holiday because of increased parkinsonian symptoms and withdrew from the study. The nine that remained were studied for 12 months and showed reduction in some adverse effects during the days off medications without markedly increased parkinsonian symptoms. Adverse effects that improved included disordered sleep, dyskinesia and myoclonus. Adverse effects that did not improve included loss of efficacy, "on-off" episodes and drug induced dystonia. Control patients showed no improvement in parkinsonian symptoms or side effects throughout the study.

Koller also devised a variation of the drug holiday by administering levodopa on an alternate day schedule.¹⁸ He studied 20 patients who were being placed on levodopa for the first time and 6 patients who had been treated with levodopa for an average of 6.7 years. Seventeen of the 20 previously untreated patients noted improvement of symptoms with alternate day levodopa therapy and experienced no deterioration on the "off" day.

Five of the six patients who went from daily levodopa therapy to alternate day therapy were improved only on days they received levodopa and were returned to daily therapy after one week.

Dopamine receptor dynamics have been examined in a number of laboratory studies. The effect of destruction of the dopaminergic nigrostriatal pathway on the function of striatal dopamine receptors has been extensively reviewed by Seeman.¹⁹ When striatal dopamine depletion exceeds 90%, increases in dopamine receptor number of 20-90% occur. Receptor affinity of dopaminergic agonists is unchanged.

Striatal dopamine receptor changes have also been examined following chronic levodopa administration. Suga administered levodopa for 30 days to rats with unilateral destruction of the nigrostriatal pathway.²⁰ Striatal dopamine receptor number decreased with levodopa treatment but the receptor number remained elevated above levels seen in control (unlesioned) animals. Schneider et al., working with a similar rat model, administered either levodopa or bromocriptine for 30 days.²¹ Subsequent dopamine D2 receptor binding analysis demonstrated a reversal of the supersensitive state to levels not significantly different from controls. Reches found that in rats with haloperidol-induced supersensitivity of dopamine receptors, prolonged treatment with a high dose of levodopa produced a reduction in post-synaptic dopamine receptor numbers to levels similar to those seen in control animals.²²

Using rats with unilateral 6-hydroxydopamine-induced nigrostriatal pathway destruction, we have simulated a "drug holiday".²³ Bromocriptine 2mg/kg was administered every 12 hours for 30 days, followed by a 7 day "drug holiday" and then reinstitution of the drug regimen. Dopamine receptor activity was evaluated in lesioned and unlesioned striata after chronic therapy, after bromocriptine holiday and after drug reinstitution. We found dopamine receptor number to be increased in the striatum following nigrostriatal pathway destruction, indicating receptor upregulation or "supersensitivity". Chronic bromocriptine treatment reduced dopamine receptor number to levels not significantly different from controls. Drug holiday produced a return of the

supersensitive state in lesioned striata. However, reinstitution of drug therapy again lowered receptor number to levels not significantly different from controls within one week. An additional week of drug therapy produced no further changes. No changes in dopamine receptor sensitivity occurred. No other study has yet been done simulating a drug holiday.

Discussion

Clinical studies of drug holidays have met with variable success. Approximately 25% of patients show no improvement following holiday while others show only transient improvement that disappears within six months. Long term improvement is disputed. Eleven of 16 patients studied by Weiner¹² improved immediately after a holiday but subsequent follow-up by Koller¹³ documented gradual deterioration over the next year with no significant difference in function from pre-holiday scores at 9 months. The greatest improvement was described by Direnfeld with 4 of the 9 patients (44%) maintaining benefit at one year.¹¹ Kofman noted that only 6 of 31 patients (19%) maintained improvement at one year.¹⁴ Mayeux found no significant differences between the drug holiday group and a control group at 6 and 12 months post-holiday.¹⁵ Patients that do show sustained improvement following drug holiday cannot be predicted by age, sex, duration of disease or previous drug therapy, although Kaye and Feldman did find the most severely impaired had the greatest functional improvement when they did respond.¹⁶

The potential complications of drug holiday in patients with Parkinson's disease are significant. Dehydration, thrombophlebitis and aspiration pneumonia may occur, as can less frequent complications such as pulmonary embolus and a neuroleptic malignant-like syndrome.

Proposed alternatives to extended withdrawal of levodopa included weekend drug holidays. Improvement in half of the patients has been described without any severe complications. Weekend holidays may be useful in some individuals. Alternate day therapy is not effective.

Anti-parkinson medications, such as levodopa and bromocriptine, do produce down-

regulation of supersensitive dopamine receptors. We have demonstrated that receptors return to a supersensitive state during a drug holiday but that this upregulation is quickly reversed with reinstitution of the drug. This suggests that short term improvement may occur following drug holiday due to resensitization of downregulated receptors but if long term improvement occurs, other mechanisms are responsible.

Summary

Considering the unpredictable benefit from a drug holiday and the potential risks to the patient, we conclude elective drug holidays should not be undertaken in patients with Parkinson's disease.

Acknowledgement

This work was supported in part by a Nebraska Medical Foundation Summer Fellowship Award to Anne Kenny.

References

1. Kessler II: Parkinson's disease in epidemiologic perspective. *Adv Neurol* 1978; 19:355-384.
2. Rinne UK, Lonnberg P, Koskinen V: Dopamine receptors in the parkinsonian brain. *J Neural Trans* 1981; 51:97-109.
3. Hornykiewicz O: Parkinson's disease. In: *Disorders of Neurohumoral Transmission*. Crow, T.J. (Ed.), Academic Press, London 1982; pp 121-143.
4. Muenter M: Should levodopa therapy be started early or late? *Can J Neurol Sci* 1984; 11 (Suppl 1): 195-199.
5. Dougan D, Wade D, Mearrick P: Effects of L-Dopa metabolites at a dopamine receptor suggest a basis for "on-off" effect in Parkinson disease. *Nature* 1978; 254:70-72.
6. Fahn S, Bressman SB: Should levodopa therapy for Parkinsonism be started early or late? Evidence against early treatment. *Can J Neurol Sci* 1984 11(Suppl 1): 200-205.
7. Nutt JG, Fellman, JH: Pharmacokinetics of Levodopa. *Clin Neuropharmacol* 1984; 7:35-49.
8. Lee T, Seeman P, Rajput A, Farley IJ, Hornykiewicz O: Receptor basis for dopaminergic supersensitivity in Parkinson's disease. *Nature* 1978; 272:59-61.
9. Rinne UK, Koskinen V, Lonnberg P: Neurotransmitter Receptors in the Parkinsonian Brain. In: UK Rinne, M Klinger, G Stamm, (Eds) *Parkinson's Disease: current progress, problems and management*. Elsevier/North Holland, Amsterdam; 1980; 93-109.
10. Sweet RD, Lee JE, Speigel HE, McDowell F: Enhanced response to low doses of levodopa after withdrawal from chronic treatment. *Neurology* 1972; 22:52-525.
11. Direnfeld LK, Feldman RG, Alexander MP, Kelly-Hayes M: Is 1-dopa drug holiday useful? *Neurology* 1980; 30:785-788.
12. Weiner WJ, Koller WC, Perlik S, Nausieda PA, Klawans HL: Drug holiday and management of Parkinson disease. *Neurology* 1980; 30:1257-1261.

13. Koller WC, Weiner WJ, Perlik S, Nausieda PA, Klawans HL: Complication of chronic levodopa therapy: Long-term efficacy of drug holiday. *Neurology*; 1981; 31:473-476.
14. Kofman OS: Are Levodopa "Drug Holidays" Justified? *Can J Neurol Sci* 1984 11 (Suppl):206-209.
15. Mayeux R, Stern Y, Mulvey K, Cote L: Reappraisal of Temporary Levodopa Withdrawal ("Drug Holiday") in Parkinson's Disease. *New Eng J Med* 1985; 313:724-728.
16. Kaye JA, Feldman RG: The role of 1-dopa holiday in the long-term management of Parkinson's disease. *Clin Neuropharmacol* 1986; 9:1-13.
17. Goetz CG, Tanner CM, Nausieda PA: Weekly drug holiday in Parkinson disease. *Neurology* 1981; 31:1460-1462.
18. Koller WC: Alternate day levodopa therapy in Parkinsonism. *Neurology* 1982; 32:324-326.
19. Seeman P: Brain dopamine receptors. *Pharmacol* 1980; 32:229-313.
20. Suga M: Effect of long-term L-Dopa administration on the dopaminergic and cholinergic (muscarinic) receptors of striatum in 6-hydroxydopamine lesioned rats. *Life Sci* 1980; 27:877-882.
21. Schneider MB, Murrin LC, Pfeiffer RF, Deupree JD: Dopamine receptors: effects of chronic levodopa and bromocriptine treatment in an animal model of Parkinson's disease. *Clin Neuropharmacol*, 1984; 7:247-257.
22. Reches A, Wagner HR, Jiang DH, Jackson V, Fahn S: The effect of chronic 1-dopa administration on supersensitive pre- and postsynaptic dopaminergic receptors in rat brain. *Life Sci* 1982; 31:37-44.
23. Kenny AM, Schneider MB, Baden DR, Pfeiffer RF, Murrin LC: Bromocriptine holiday: effects on dopamine receptors and turning behavior in rats. *Neurology* 1986; 36:400-404.

Osteomyelitis of the Head and Neck

OSTEOMYELITIS refers to an inflammation of the medullary portion of bone which may often spread to involve the associated cortex and periosteum. The incidence of this disease, especially in the head and neck region, has decreased significantly with the introduction of antibiotics and better dental care. Recognition and successful treatment of osteomyelitis, however, still presents a challenge. This paper reviews the etiology, signs, symptoms, and methods of treatment of the many types of osteomyelitis which may occur in the head and neck region. The complications which may be associated with this disease are also explored.

Definition

Defining osteomyelitis strictly would be to classify it as an inflammation of the medullary portion of a bone. However, rarely is this the only part of the bone that is involved. More commonly the inflammation is spread to the overlying cortical bone and periosteum.¹

History

While in the past osteomyelitis of the head and neck region was relatively prevalent, the introduction of antibiotics and better dental care has decreased its incidence significantly.² Inappropriate usage of antibiotics has selected for organisms in the past only rarely associated with this disease. This, coupled with the fact that this disease is commonly associated with immunocompromised individuals, makes treatment a challenge. Additionally, the current rarity of osteomyelitis complicates therapy due to our inexperience in dealing with it.^{1,3}

Course of Disease

The agent responsible for the osteomyelitis is introduced into the medullary portion of the bone via various means of entry. If the causative agent is blood-borne, it typically will be deposited in the medullary cortex, as it is here that capillary blood flow is the slowest. The inflammation that results will tend to compromise the supply of blood due to the edema in the relative confines of the bone cavity, thereby compressing the blood vessels. This leads to ischemia and venous stasis,

LYLE W. NELSON, D.M.D.*

Resident, Department of Oral and Maxillofacial Surgery,
University of Nebraska Medical Center

DANIEL D. LYDIATT, D.D.S., M.D.

Assistant Professor, Department of Oral and
Maxillofacial Surgery, University of Nebraska
Medical Center

causing compromise of the host defenses.⁴ The infection then begins to spread via the Haversian systems and ultimately reaches the cortex. Pus often will accumulate between the cortex and the overlying periosteum, elevating it off the bone and further compromising the blood supply.¹

In infants, where the periosteum is loosely attached, the infection may spread along the bone to the temporomandibular joint, resulting in septic arthritis. This may also occur in adults, but is much less common.^{1,4} Because of the increased pressure present, the periosteum may be penetrated with subsequent draining fistulas or formation of overlying soft tissue abscesses. The pressure generated may also compress nerves in the bone, producing pain and/or paresthesia.^{1,2}

Ultimately, if the ischemia is present for a critical period of time, necrosis of bone ensues and a sequestrum is formed. This is a piece of nonvital bone that may ultimately be sloughed, remodeled, or surgically removed.^{4,6}

As the disease progresses and becomes more chronic, reparative processes begin, even though the underlying infection is not totally resolved. New subperiosteal bone may be formed by osteoblastic activity in an apparent attempt to "wall off" the infection. This radiopaque area of bone is called the involucrum.^{2,6,7}

*Reprint requests: Doctor Lyle W. Nelson, University of Nebraska Medical Center, Department of Oral Surgery, 42nd and Dewey Avenue, Omaha, Nebraska 68105-1065.

Many different courses of osteomyelitis may be observed. These are typically divided into acute, subacute, and chronic, although in any one case there is typically a mixture.^{5,8}

Etiology

Predisposing Conditions: As mentioned earlier, one of the critical elements associated with osteomyelitis is insufficient or decreased blood supply. Hence, persons with diabetes mellitus are at a greater risk for developing osteomyelitis.^{1,5,9} Other factors that lead to an increased risk because of vascular insufficiency include radiation therapy, bone malignancies, osteopetrosis, sickle cell anemia, atherosclerosis, and Paget's disease.^{1,5,10,11}

Because of the bacteriologic etiology of osteomyelitis, it is reasonable to suspect an increased incidence of the disease in those persons with compromised host defenses. For this reason osteomyelitis is more commonly seen in persons suffering from leukemia, severe anemia, diabetes, agranulocytosis, or chronic alcoholism. People who have a febrile illness such as typhoid, or who are drug addicts, are more susceptible for the same reason.^{1,4} Patients on immunosuppressive drugs are at a greater risk. Osteomyelitis occurring in immunocompromised individuals is often caused by opportunistic normal flora.^{1,11} Patients with osteopetrosis are also included in this category because of the neutropenia secondary to bone marrow obliteration.¹¹

Because of decreased blood supply in the mandible, it is more susceptible to osteomyelitis than the maxilla.^{2,7} The coronoid process is an exception to this and is rarely involved, as it has additional blood supply from the temporalis muscle's vessels.^{1,10} The thin cortical plates of the maxilla, and the relative lack of medullary spaces are additional reasons why the maxilla is less frequently involved.¹

Pathogenesis

Osteomyelitis in the oral and maxillofacial regions most commonly develops from an existing focus of infection, typically associated with a nonvital tooth or periodontal disease process. Another possible cause is trauma, with either direct inoculation of organisms from puncture wounds, or compound fracture with subsequent infection.¹

Hematogenous spread of infection can be responsible for osteomyelitis, particularly in children where it affects the long bones. As a source of infection in the facial bones, it is less important.^{1,4,5}

Osteomyelitis can be described as either primary or secondary. Primary osteomyelitis is a result of direct implantation of organisms into the bone because of trauma or surgical procedures. This would include infection following tooth extraction. Secondary osteomyelitis is spread of infection from another source, whether this be a soft tissue abscess or septicemia.¹²

Organisms: The microbiology of osteomyelitis has changed dramatically with the introduction of antibiotics and superior culturing techniques. Because of these changes, organisms that once were thought not to be associated with osteomyelitis have recently been shown to cause the disease.¹

Continued culturing of the wound, as well as determination of antibiotic sensitivity as the disease progresses, is imperative. Estimates of negative cultures range from 16-to 50-percent and may reflect poor culturing technique, particularly for anaerobes.¹⁰

The specific organism involved varies considerably. **Staphylococcus aureus** is thought to be responsible for over 50-percent of osteomyelitis cases, followed by streptococci, pneumococci, and mixed organisms.^{4,5} There is an increasing incidence of both gram negative and anaerobic infections, particularly **Bacteriodes**.^{5,13} In patients under the age of two, **Hemophilus influenza** is a frequent causative agent.⁶ Drug addicts are prone to infection by **Pseudomonas**, while patients with sickle cell disease or other hemoglobinopathies are more likely to contract **Salmonella** osteomyelitis.^{4,12} Diabetics also are more prone to "malignant external otitis," whereby **Pseudomonas** infections extend into the temporal bone, causing osteomyelitis.¹⁴ An increasing organism resistance to certain antibiotics has been noted and is thought to be related to inadequate treatment of previous infections.

Specific types of osteomyelitis are caused by the organisms **Treponema pallidum**, **Mycobacterium tuberculosis**, and **Actinomyces israelii**.¹

Diagnosis

Lab Values: Lab values associated with osteomyelitis are typically of little or no value. A mild leukocytosis may be present, in addition to an increase in the sedimentation rate due to inflammatory changes present.¹²

Radiographic Changes: Relying on radiographic changes to diagnose osteomyelitis is not recommended, as 30-to 60-percent of the mineralized portion of bone must be removed before any changes are seen radiographically.¹ Even in acute osteomyelitis, one to three weeks may elapse before radiographic evidence (including Computerized Tomography) of osteomyelitis is apparent. Late-appearing radiographic changes contribute to the difficulty of early diagnosis of the disease.^{1,12,14}

Early recognition and diagnosis of this disease rely heavily on historical and clinical clues.¹ The radiographic appearance of the lesions will vary from radiolucent to radiopaque, depending on the particular type of osteomyelitis present.

Radionuclide scans are thought to be the most diagnostic and cost-effective study available. Sequential technetium and gallium scans may be used to diagnose osteomyelitis and to follow treatment effectiveness in terms of disease regression. Technetium uptake in bone increases in areas of increased osteoblastic or osteoclastic activity. Technetium will reveal areas of acute or chronic osteomyelitis, as well as normal bone repair.^{1,13} Gallium will isolate in regions of inflammation. Sequential use of both scans provides much information because of the sensitivity of this method. Additionally, this method of diagnosing osteomyelitis is thought to be less expensive and more widely available than other types of scans. Well-controlled comparisons of CT and MRI have not been done to date.^{14,15}

Types of Osteomyelitis

Acute Suppurative or Acute Pyogenic Osteomyelitis: This type of osteomyelitis is most commonly caused by dental infection. The disease process itself may be extensive or localized. The clinical features of this disease include a predilection for the mandible; the maxilla, however, may be involved. It may occur at any age, and there exists a recognized entity that is unique to children, which causes

significant morbidity and mortality.⁸ In the adult, the disease is associated with severe pain, increased WBC count, malaise, sweating, and fever.¹ Teeth are sore and loose, compromising mastication.⁸ Anesthesia or paresthesia of the inferior alveolar nerve is common.

Radiographic changes are not evident for one to four weeks, but once visible, progress rapidly. Radiolucent lytic areas become apparent and the trabeculae become indistinct. The bone often appears "moth-eaten" on radiographic examination. Histologically, one sees primarily polymorphonuclear leukocytes.^{3,8}

Differential diagnosis of this disease would include cellulitis, tuberculosis, mycotic infections, and Ewing's sarcoma.

Treatment involves selection of the proper antibiotic as indicated by culture and sensitivity tests. Incision and drainage may be necessary if abscess formation or cellulitis is present. Additional surgery may be necessary to remove sequestra.⁸

Prognosis, if the disease is properly treated, is good. If improperly treated, this entity can lead to soft tissue abscesses, pathologic fractures, chronic osteomyelitis, or cellulitis. Mortality is less than one percent, while the morbidity can be high.¹²

Chronic Suppurative or Chronic Pyogenic Osteomyelitis: This disease may be the result of progression of acute suppurative osteomyelitis, or it may develop independently without going through an acute phase. The clinical features of this entity are quite similar to, though milder than, those of acute suppurative osteomyelitis. The body temperature and the WBC count, while both still elevated, are significantly less. The overlying tissues are usually more inflamed and edematous with frequent fistula formation. This disease is often complicated by acute exacerbations.^{8,12}

The radiographic appearance is similar to acute pyogenic osteomyelitis, but typically takes longer to develop (Fig. 1). Histologically, this form of osteomyelitis appears much the same as the acute variant. Differential diagnosis should include benign and malignant tumors, as well as osseous dysplasia.

The treatment again is antibiotics, although typically for a longer duration. Hyperbaric



Figure 1

Lateral oblique radiographs of the mandible demonstrating bony destruction typical of chronic (or acute) osteomyelitis.



Figure 2

Periapical radiograph of the mandibular left first molar with condensing osteitis inferior to the apex of the distal root.

oxygen also has been used with apparent good results, and surgery is a final possibility. The prognosis depends on possible complications, such as seeding to other areas, or problems related to chronic disease. Pathologic fractures are still a consideration.

Chronic Focal Sclerosing Osteomyelitis or Condensing Osteitis: This is a nontypical reaction to infection, occurring in instances of low-grade infection or high host-resistance. It is rarely found in individuals over age 20. Typically, it is discovered in association with a carious mandibular first molar. Mild pain, secondary to an infected pulp, may be the only symptom.⁸

Radiographically, it appears as a well demarcated radiopaque mass associated with the root apex of the tooth involved (Fig. 2). Histologically, this lesion is consistent with dense sclerotic bone with mild inflammation present.⁸

Treatment of this lesion involves restoration or removal of the tooth involved. Removal of the lesion is not indicated unless symptomatic. The prognosis is good. One may see total remodeling of the area involved, but more

often the lesion is still apparent on radiographs years after correction of the cause.⁸

Chronic Diffuse Sclerosing Osteomyelitis: This is similar to condensing osteomyelitis except that, as the name suggests, it is much more widely spread. This disease typically occurs in response to a low-grade infection. It is more often associated with periodontal disease than with pulpal pathology.^{8,16,17}

This form of osteomyelitis is most commonly seen in elderly black females. Often, there are no signs or symptoms unless an acute exacerbation develops, either spontaneously or following a tooth extraction. At that time, patients usually complain of a bad taste or vague discomfort in the affected region of bone. Occasionally, this disease presents with draining fistulas, expansion of the mandible, or mucosal ulceration.^{16,17,18}

Radiographically, it is a diffuse radiopaque lesion, although osteolytic regions may be present (Fig. 3). It may be seen in both the maxilla and the mandible, although it is much more common in the latter.¹⁶ Radiographic appearance is quite similar to Paget's disease.

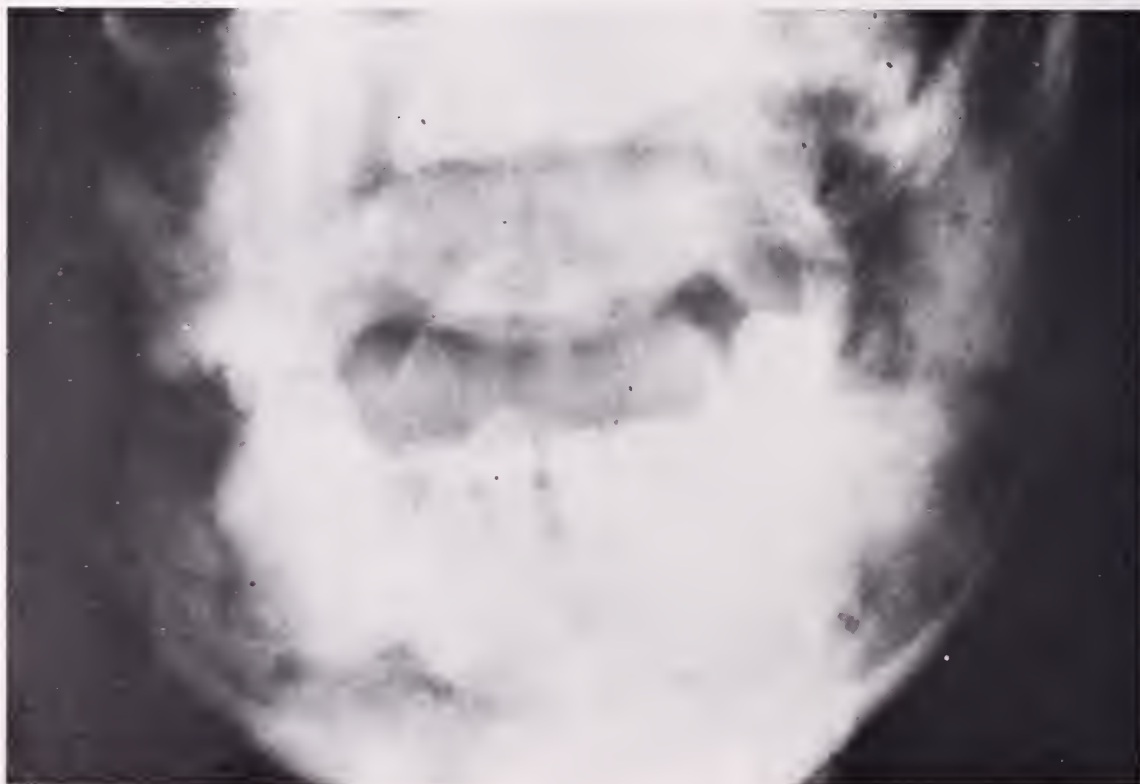


Figure 3
Postero-anterior radiograph of the mandible showing chronic diffuse sclerosing osteomyelitis of the mandibular ridge.

This disease tends to be slowly progressive over the years, with the unique finding of sclerosis only in those areas that are, or once were, tooth-bearing. The disease is not, therefore, seen in the ascending ramus, coronoid process, or condylar process. The lesion is often described as having a "cotton wool" pattern.^{8,16,17}

Histologically, the lesion shows dense sclerotic bone arranged in an irregular trabecular pattern. Little inflammatory component is seen.¹⁷

Treatment is complicated by the extensiveness of the disease process. Attention is focused on control of the acute episodes by treatment with antibiotics; penicillin should be the first-line drug in this instance. Asymptomatic patients do not require treatment.¹⁶ The compromised vascularity, which is a result of increased bone density, complicates extractions by impairing proper healing.⁸ This disease is slowly progressive but is seldom worrisome, as it does not cause bony destruction. Cortisone has been noted to have a dramatic effect in controlling pain in these patients. It is not always possible to isolate organisms from these lesions, and organisms that are isolated are usually of low virulence.^{16,18}

Chronic Osteomyelitis with Proliferative Periostitis (Garre's Osteomyelitis): In this form of osteomyelitis, mild inflammation or irritation of the involved bone leads to a focal thickening of the periosteum. This is thought to occur because of the proliferative powers of the periosteum in younger individuals.^{8,19}

This is most commonly seen in young adults under the age of 25, where it occurs predominantly on the anterior surface of the tibia. In the head and neck region, this type of osteomyelitis, like most others, shows an affinity for the mandible, and is usually seen in association with an abscessed first molar tooth or an infected or traumatized operculum.^{8,20} The patient typically presents with a hard mass on the mandible, which arises over several weeks and is associated with a toothache. Occasionally, the infection arises from the overlying soft tissues. Swelling is non-tender, localized and firm. This lesion has never been known to cross the midline, or to arise from the lingual surface of the mandible. Radiographically, there is an apparent focal area of bony proliferation, often with an "onion skin" appearance (i.e. multiple cortical layers).⁸ (Fig. 4). Because of the radiographic appearance,



Figure 4

Occlusal radiograph of Garre's osteomyelitis on the lateral border of the mandible. Multiple cortical layers are evident.

the differential diagnosis of this lesion must include cortical hyperostosis (Caffey's disease), Ewing's sarcoma, osteoid osteoma, and osteosarcoma. A biopsy should be strongly considered.^{1,19}

Histologically, this lesion shows new bone formation with chronic inflammatory cells.^{8,19}

The treatment for this lesion is to remove the source of infection. This may be done by extracting or restoring the offending tooth, or by removing the operculum. After this is corrected, one typically will see spontaneous body-remodeling in two to six months. In rare cases, surgical recontouring may be necessary.¹⁹

Osteomyelitis Associated with Fractures:

Usually this form of osteomyelitis is associated with inadequate treatment of facial fractures. Osteomyelitis may be secondary to poor stabilization of the fracture, or overzealous fixation leading to devascularization of the bony segments.^{1,21}

Actinomycotic Osteomyelitis: This is a disease which is similar to "lumpy jaw" seen in cattle.⁸ Three different species of organisms are known to cause this phenomenon. The one most likely to infect man is *Actinomyces israelii*. This is an opportunistic organism which has characteristics of both fungi and bacteria.^{1,8}

Typically, this infection follows some breakdown in host defenses, whether this be inflammation of the periodontium or direct trauma. Patients present with small areas of purulent drainage from firm, soft tissue masses in the cervical and facial regions. Diagnosis often relies on the demonstration of "sulfur granules" present in the pus expressed from the lesions. Delayed healing of extraction sites is common.¹

Radiographically, this disease can appear as regions of sclerosis, radiolucency, or both.¹ Histologic examination shows colonies of organisms surrounding an abscess core. Many polymorphonuclear leukocytes are present.⁸

The treatment for this condition is surgical incision and drainage of the lesion, making certain to coalesce all loculations. The antibiotic of choice is penicillin, which initially should be given parenterally. This may be switched to oral therapy when the acute phase

is resolved, and should be continued for 3-4 months. Treatment consists of 10 to 20 million units of penicillin per day for 2-4 weeks, followed by 5 to 10 million units per day for another 3-4 months. If the patient is allergic to penicillin, an alternative regimen consists of tetracycline or erythromycin 500 mg. four times daily for six months.

Radiation Osteomyelitis: This is a consequence of radiation therapy for cancer of the head and neck region. Bone, because of its increased density, tends to absorb more radiation than the surrounding soft tissues. Absorption of the radiation compromises the bone's vascularity, resulting in a necrosis similar to that seen in osteomyelitis. It is initially aseptic; however, a common complication is increased susceptibility to infection, due to the decreased blood flow to the underlying bone.^{1,14}

The clinical picture is one of elevated temperature, exposed bone, trismus, pain, and fetid breath. Pathologic fractures and draining fistulas may be present.¹

X-ray examination may show normal-appearing bone early in the course of the disease. Because of the compromised vasculature, sequestrum and involucrum formation are not often present.¹

Treatment of this condition is initially directed at controlling the infection. Most often, the first-line drug is penicillin. Recontouring or resection of exposed bone may be necessary. Hyperbaric oxygen has been shown to be useful.¹

Treatment

Chemotherapy: Antibiotics are the mainstays of treatment. Initial and subsequent culture and sensitivity testing of the involved tissues is vital. A biopsy of the bone for culture and sensitivity is often beneficial. The initial empirical choice of antibiotics is a penicillinase-resistant penicillin. This is necessary to cover for the predominant organism which causes osteomyelitis, a *Staphylococcus* species. A second choice is Clindamycin; third choice, a Cephalosporin; and fourth choice, Erythromycin. Continuing antibiotic therapy would depend on the culture and sensitivity results, as well as resolution of clinical signs and symptoms.¹ The duration of antibiotic therapy

necessary to properly treat osteomyelitis is often contested. For acute suppurative osteomyelitis, antibiotic therapy should continue anywhere from 2-4 weeks after the symptoms have ceased. Chronic osteomyelitis should be treated for 2-4 months following resolution of symptoms, and actinomycotic osteomyelitis should be treated for up to 6 months.¹ Initial hospitalization and parenteral antibiotics often may be necessary.⁶ Because of the relationship between compromised host defenses and osteomyelitis, human gamma globulin may be beneficial in treatment of osteomyelitis.⁹

Surgery: Early drainage of the lesion can prevent much of the lifting of the periosteum off the bone, thereby decreasing the amount of vascular compromise and pain. Removal of loose and carious teeth is recommended.

Sequestrectomy is often performed to remove the nonvascular bone which cannot be penetrated by antibiotics. In most instances, removal of the sequestrum should be delayed until it is fully formed.^{1,2}

Saucerization is another process used to treat osteomyelitis. An intraoral approach is used to create a saucerlike defect on the buccal surface of the mandible. By decompressing the mandible in this manner, the debris, avascular fragments, and purulence all can be expelled, thereby decreasing the patient's pain. This procedure does, however, decrease the mass of the mandible significantly, as all necrotic margins are removed. Reduction on the lingual surface of the mandible is seldom indicated, except in cases of extensive necrosis.¹

Another method of decompressing the mandible is decortication. It involves removal of the chronically infected inferior or buccal cortical surface of the mandible. Typically, decortication extends 1-2 centimeters beyond the margin of the necrotic bone, indicated by bleeding bone. The medullary space is then examined and debrided. The overlying tissue is then placed into the defect and closed primarily. This overlying tissue is expected to subsequently provide the blood supply to the mandible's medullary space. This allows antibiotics to reach the previously inaccessible areas of the affected bone.^{1,2}

A final surgical method of treating osteomyelitis involves placing drainage tubes in close proximity to the involved bones at the

time of surgical debridement. A water-tight seal is then obtained during closure around these tubes. Postoperatively, one tube is attached to a low suction pump while an antibiotic solution is introduced through the other. In this way, the infected region may be irrigated. This method should be used in conjunction with, and not in place of, systemic antibiotics.¹

Bone Grafting: Some authors suggest immediate placement of an iliac crest or rib autograft at the time of surgical debridement, claiming no difference in the healing of this type of graft, when compared with a bone graft into a non-infected site.^{1,9} Other authors suggest control of the infection before attempting grafting of the resected area.^{1,7,9}

Hyperbaric Oxygen: As discussed earlier, decreased blood flow is a critical element in developing and maintaining osteomyelitis. This decreased vascular supply leads to relative tissue hypoxia. Normal bone displays an oxygen tension of 40 to 50 mm. Hg., while in osteomyelitis the values drop to 10 to 20 mm. Hg.²¹

Hyperbaric oxygen is the inhalation of 100 percent oxygen at an increased atmospheric pressure.²² Breathing oxygen at increased pressures will increase oxygen tension in the plasma from 100 mm. Hg., to 1900 mm. Hg., at 2.5 atmospheres.²¹ This is not increased Hgb saturation, but rather increased dissolved oxygen in the plasma. By increasing the amount of oxygen in the blood, the relative hypoxia of the osteomyelitic zone can be restored to normal or slightly greater than normal. This is beneficial in several ways. First, increased oxygen tensions will lead to fibroblast proliferation, budding of capillaries, and increased collagen formation, all of which are important in the healing process.^{1,13} Second, osteogenesis requires optimal oxygen tension. The optimum oxygen tension for maximum osteogenesis is 260 mm. Hg. This can be achieved in osteomyelitic bone if hyperbaric oxygen is used. It is for this reason that hyperbaric oxygen is often used with bone grafting. Third, microorganism growth is enhanced in avascular or ischemic tissues. Increased oxygen tensions are felt to be bacteriostatic and/or bactericidal to the organisms involved, making them less resistant to the antibiotics being used.¹ This occurs because

auto-oxidation converts the molecular oxygen to supraoxide, and ultimately to hydrogen peroxide, which is toxic to most organisms, particularly the anaerobes. Lastly, increased oxygen tensions are thought to enhance the activity of the polymorphonuclear leukocytes. Polymorphonuclear leukocytes in ischemic tissues are known to be less effective in phagocytizing organisms than are their counterparts in well-vascularized tissues.^{1, 11, 13, 21, 22}

Hyperbaric oxygen is used most often in chronic osteomyelitis or osteoradionecrosis. This form of therapy is adjunctive in nature and should not be construed to be a method of primary treatment. While this therapy shows great promise in cases that are refractory to other forms of treatment, proper antibiotic regimens and appropriate surgeries are to be used in conjunction with hyperbaric oxygen.^{1,11,21}

Complications

Pathologic Fractures: These tend to occur in osteomyelitis because of the significant loss of structure accompanying the disease.^{7,12} One should be prepared at the time of surgery to deal with this possible complication.⁹

Inadequate Treatment: The most common and perhaps the most dreaded complications arise from inadequate treatment of the acute phase. These complications lead to a chronic osteomyelitis, which typically is much more difficult to treat.¹² The chronic stage tends to wall itself off, making it difficult for antibiotics to reach the focus of infection.^{7,9} If osteomyelitis of the frontal bone is not aggressively treated, it may extend intracerebrally.³ Another complication of inadequate treatment is recurrent acute exacerbations. Septicemia and seeding of other areas with the infectious agent are also possible sequelae.¹² Disturbance of growth rate is yet another complication, as is amyloidosis.

Summary

Early recognition and treatment of osteomyelitis are crucial in light of possible complications associated with this disease entity. This paper has reviewed osteomyelitis, with an emphasis on the forms of this disease which occur in the head and neck region. Treatment modalities have been discussed, as have the methods of diagnosing this often elusive

condition. Despite the reduced incidence of osteomyelitis, one must still be alert to its possible presence when diagnosing head and neck lesions.

The authors wish to thank Michele Maitland for reviewing the manuscript.

References

1. Topazian Richard G and Goldberg Morton H: Management of Infections of the Oral and Maxillofacial Regions, ed. 1, Philadelphia, 1981, W. B. Saunders Company.
2. Kruger Gustav O: Textbook of Oral and Maxillofacial Surgery, ed. 5, St. Louis, 1979, C. V. Mosby Company.
3. Balm, AJM, et. al: "Osteomyelitis in the Head and Neck", The Journal of Laryngology and Otology, 99, October, 1985, pp. 1059-65.
4. Robbins Stanley L. and Cotran Ramzi S. and Dumar Vinay: Pathologic Basis of Disease, ed. 3, Philadelphia, 1984, W. B. Saunders Company.
5. Fitzgerald Robert H: "Musculoskeletal Infections: Recognition, Prevention, and Management", Therapeutic Conferences, 1, 1982, pp. 10-13.
6. Hurst Willis J: Medicine for the Practicing Physician, Boston, 1983, Butterworth's.
7. Marano Philip D. et. al: "Progression of Chronic Osteomyelitis of the Mandible and Bone Graft: Report of Case", Journal of the American Dental Association, 83, October, 1971, pp. 863-7.
8. Shafer WG, Hine MK, and Levy BM: A Textbook of Oral Pathology, ed. 4, Philadelphia, 1983, W. B. Saunders Company.
9. Azumi Tomohiko, et. al: "Pathologic Fracture of the Mandible Resulting from Osteomyelitis: Report of Cases", Journal of Oral Surgery, 38, July, 1980, pp. 525-29.
10. Daramola JO: "Massive Osteomyelitis of the Mandible Complicating Sickle Cell Disease: Report of Case", Journal of Oral Surgery, 39, February, 1981, pp. 144-46.
11. Steiner Martin, et. al: "Osteomyelitis of the Mandible Associated with Osteopetrosis", Journal of Oral and Maxillofacial Surgery, 41, 1983, pp. 395-405.
12. Krupp Marcal A, and Chatton Milton J: Current Medical Diagnosis and Treatment, Los Altos, 1982, Lange Medical Publications.
13. Seto Bradley G: "Chronic Osteomyelitis of Mandible Caused by Penicillin-Resistant Bacterioides Ruminicola", Oral Surgery, 61:1, January, 1986, pp. 29-31.
14. Noyek Arnold M, et. al: "The Clinical Significance of Radionuclide Bone and Gallium Scanning in Osteomyelitis of the Head and Neck", Laryngoscope, 94:5 (part 2), 1984, pp. 1-21.
15. Strauss Melvin, et. al: "Osteomyelitis of the Head and Neck: Sequential Radionuclide Scanning in Diagnosis and Therapy", Laryngoscope, 95:1, January, 1985, pp. 81-4.
16. Jacobsson S and Hollender L: "Treatment and Prognosis of Diffuse Sclerosing Osteomyelitis (DSO) of the Mandible", Oral Surgery, 49:1, January, 1980, pp. 7-14.
17. Rabe William, et. al: "Chronic Sclerosing Osteomyelitis: Treatment Considerations in an Atypical Case", Oral Surgery, 49:2, February, 1980, pp. 117-21.

18. Jacobsson S, et. al: "Bacteriologic and Serologic Investigation in Diffuse Sclerosing Osteomyelitis (DSO) of the Mandible", *Oral Surgery*, 54:5, November, 1982, pp. 506-11.

19. Lichty G, et. al: "Garre's Osteomyelitis", *oral Surgery*, 50:4, October, 1980, pp. 309-13.

20. Bhaskar SN: *Radiographic Interpretation for the Dentist*, ed 3, St. Louis, 1979, C. V. Mosby Company.

21. Kerley Thomas R, et. al: "The Effect of Adjunctive Hyperbaric Oxygen on Bone Regeneration in Mandibular Osteomyelitis Report of Case", *Journal of Oral Surgery*, 39, August, 1981, pp. 619-23.

22. Mainous Elgene G, et. al: "Hyperbaric Oxygen Treatment of Mandibular Osteomyelitis: Report of Three Cases", *Journal of American Dental Association*, 87, December, 1973, pp. 1426-30.

Taxonomy of Weight Loss Results with Surgical Treatment

TAXONOMY, according to Webster's dictionary, is the science of classification. This paper presents a survey of weight loss classification used in reporting the results of surgical treatment of morbid obesity and present our surgical results.

The absolute number of pounds or kilos of adipose tissue lost over a period of time, presented in print or graphic form, may be impressive but it negates any attempt to compare results, since no point of reference is given. One may use the initial (preoperative) weight as a point of reference and present the results as percentage of the initial weight lost, or may calculate the excess body weight (i.e. the difference between the actual and the ideal body weight at any point in time) and present the results as percentage of the excess body weight lost. Another approach uses the difference between the actual and the ideal body weight, i.e. the excess body weight, expressed as percentage of the ideal body weight.

The use of initial body weight or initial excess body weight as a point of reference creates special problems in patients undergoing second surgery. Patients having their malfunctioning jejunio-ileal bypass converted to a stomach bypass or other stomach-restrictive procedure are in this category. These patients frequently present with metabolic problems while their weight is well below the morbid obesity range. One is at loss whether to use the actual weight or the original weight before the

MIECZYSLAW CEGIELSKI, M.D., F.A.C.S.*

SYBIL R. FAIRCLOTH, SRN (UK)

JOSE A. SAPORTA, SR., M.D., F.A.C.S.

From the Department of Surgery, Creighton University School of Medicine and the Prairie Medical Clinic, Omaha, Nebraska

jejuno-ileal bypass as point of reference. Using the alternative of remaining excess body weight bypasses this dilemma.

The ideal body weight as a point of reference presents a problem in itself. The commonly used, time honored height/weight chart initially published in 1942 by the Metropolitan Life Insurance Company was modified in 1959 and again in 1983. These charts separate men and women and use the body frame as a co-factor. Table I³ presents both the 1959 figures and the updated 1983 figures. Comparison of these two tables shows significant increase of desirable weights for persons of short stature, more so for men than for women, and a slight increase (3-5#) of upper limits for tall persons.

Table II⁴ presents midrange values for a medium frame person. It is based on the 1983 Metropolitan Life Insurance data (Table I). Since determination of body frame in a morbidly obese person is rather difficult and

*Reprint requests: M. Cegielski, M.D., 2602 "J" Street, Omaha, NE 68107.

Table I
METROPOLITAN LIFE INSURANCE COMPANY
DESIRABLE WEIGHTS FOR AGES 25 to 59

Height	1959 TABLE		1983 TABLE	
	Men	Women	Men	Women
4'10"		91-119		100-131
4'11"		93-122		101-134
5'0"		96-125		103-137
5'1"	107-136	99-128	123-145	105-140
5'2"	110-139	102-131	125-148	108-144
5'3"	113-143	105-135	127-151	111-148
5'4"	116-147	108-139	129-155	114-152
5'5"	119-151	111-143	131-159	117-156
5'6"	123-156	115-147	133-163	120-160
5'7"	127-161	119-151	135-167	123-164
5'8"	131-165	123-155	137-171	126-167
5'9"	135-169	127-160	139-175	129-170
5'10"	139-174	131-165	141-179	132-173
5'11"	143-179	135-170	144-183	135-176
6'0"	147-184		147-187	
6'1"	151-189		150-192	
6'2"	155-194		153-197	
6'3"	159-199		157-202	
6'4"				

The weight ranges, in pounds, are for a person not wearing shoes or other clothing.

based on subjective perception, the midrange values presented in Table II are accepted by many Health Insurance Companies and other third party payors as criteria for eligibility-determination. In 1985 the Gerontology Research Center of the National Institutes of Health published its own height/weight table³ using age as a co-factor, while eliminating completely the factor of sex (Table III). Andres, et al¹ presented a more detailed, critical analysis of these charts and tables.

The body mass index (BMI) is calculated in the metric system as body weight in kilos divided by height in meters squared. In the conventional pound/inch system the formula for calculating the BMI is body weight in pounds multiplied by 703 and divided by height in inches squared. A BMI of 20-25 is considered normal. A BMI over 30 is considered a sign of medically significant obesity. For

example a 5'4"-140#-40 year old female has a BMI of 24 which is within the normal range of 20-25. She also falls in the desirable weight range of the 1983 Metropolitan Life Insurance Company table (114-152#) and of the Gerontology Research Centers 1985 table (121-154#). Another example: A 6'2"-240#-30 year old male has a BMI of 30.8, and he falls outside both of the Metropolitan and Gerontology Research Center's norms.

For the past 15 years we have been actively involved in surgical treatment of morbidly obese patients who failed to reduce and maintain weight loss by non-surgical methods. Figure 1 presents the surgical method we have successfully used for past five years. The stomach is divided with stapling instrument creating a very small proximal pouch (25-35-ml. capacity) to hold and digest food, and excluding the rest of the stomach. This

Table II

HEIGHT AND IDEAL WEIGHTS: This table presents the 1983 Ideal Weights. The Weights used in this table are the midrange value for a medium frame person. (Source: Metropolitan Life Insurance, New York, N.Y., as displayed in Des Moines Register, 03-02-83)

HEIGHT			WOMEN		MEN	
			IDEAL WEIGHT		IDEAL WEIGHT	
ft	in	cm	lbs	kg	lbs	kg
4	10	147.3	115	52.2	---	----
4	11	149.9	117	53.1	---	----
5		152.4	119.5	54.2	---	----
5	1	154.9	122	55.3	---	----
5	2	157.5	125	56.7	136	61.7
5	3	160	128	58.1	138	62.6
5	4	162.6	131	59.4	140	63.5
5	5	165.1	134	60.8	142.5	64.6
5	6	167.6	137	62.1	145	65.8
5	7	170.2	140	63.5	149	67.6
5	8	172.7	143	64.9	151	68.5
5	9	175.3	146	66.2	154	69.8
5	10	177.8	149	67.6	157	71.2
5	11	180.3	152	68.9	160	72.6
6		182.9	155	70.3	163.5	74.2
6	1	185.4	---	----	167	75.7
6	2	188	---	----	171	77.6
6	3	190.5	---	----	174.5	79.2
6	4	193	---	----	179	81.2

proximal pouch empties into a jejunal loop construed in a Roux-en-Y fashion. This operation was described by Griffen⁵ and our technique differs only in few minor details.

Follow-up of these patients requires a method of classification and evaluation of achieved weight loss. Reinhold² proposed a simple and convenient classification of weight loss results after stomach bypass for morbid obesity. He calculates the excess weight by subtracting the ideal body weight from the actual weight and expressing this excess weight as percentage of the ideal body weight.

$$\% \text{ Excess weight} = \frac{\text{actual weight} - \text{ideal weight}}{\text{ideal weight}} \times 100$$

He uses the following categories of end-results:

Excellent	: excess weight 25% or less
Good	: excess weight 26-50%
Fair	: excess weight 51-75%
Poor	: excess weight 76-100%
Failure	: excess weight over 100%

As an illustration of this method of classification we present our results in 69 patients operated between March, 1982 and July, 1985 with the longest follow-up of 4½ years and the shortest - 6 months. All these patients had a Roux-en-Y stomach bypass with double stapling of the stomach, 25-35 ml proximal pouch and 10-12 mm gastro-jejunostomy (Fig. 2). We used the median weight for a medium frame person (Table II) as the ideal weight for



Figure 1. Stomach bypass, Roux-en-Y.

our computations. Thus, before surgery the median excess of weight for our 69 patients was 106% above the ideal weight, with the heaviest patient being 258% above her ideal weight, the least heavy only 37%. The latter patient had the stomach bypass performed in connection with dismantling of a malfunctioning jejuno-ileal bypass.

One year after surgery the median excess body weight was 16.5% with the range from -3% to 66%. Among patients followed for three to five years after the stomach bypass operation, the median excess body weight is 34% with the range from 11% to 94%; generally a good result was accomplished with an excellent result in seven patients and poor result in two.

Our criteria for patient-selection are as follows:

1. Age 20-50, though we operated and achieved excellent results in a few super-obese teenagers.
2. Excess body weight 100 pounds or 100% over the ideal weight selected from Table II. Exceptions were made for patients requiring dismantling of a malfunctioning jejuno-ileal bypass.
3. Well documented history of failure to reduce weight by non-surgical methods.

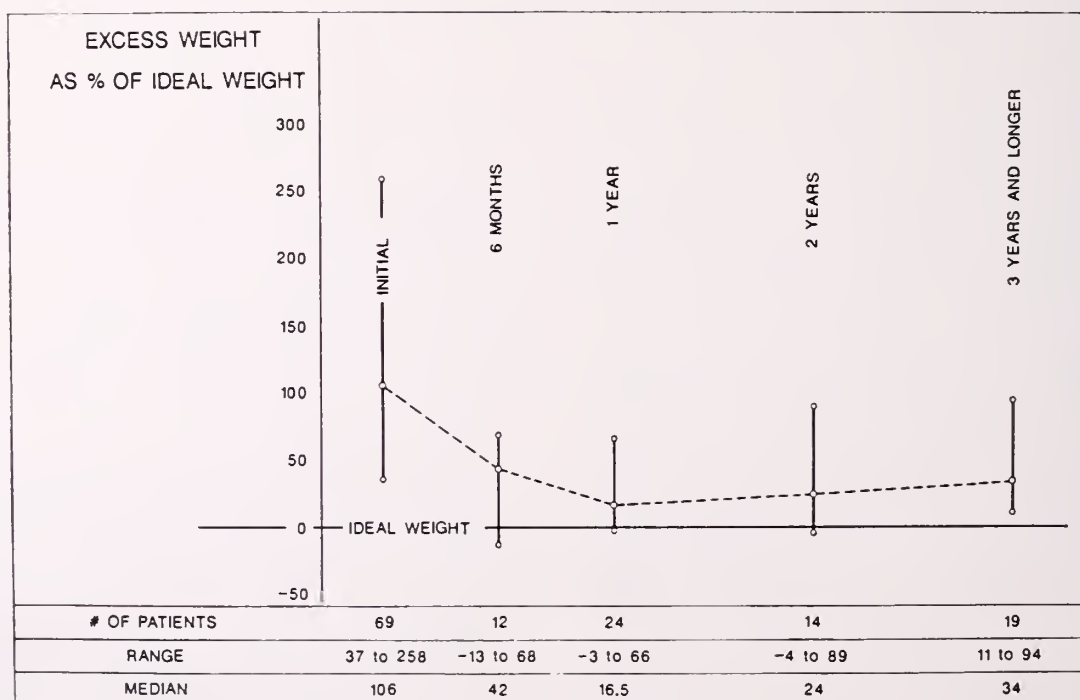


Figure 2. Weight-loss graph in 69 patients.

Table III
GERONTOLOGY RESEARCH CENTER
RECOMMENDED WEIGHTS FOR BOTH SEXES
1985 TABLE, BY AGE

20-29 yr	30-39 yr	40-49 yr	50-59 yr	60-69 yr	Height
84-111	92-119	99-127	107-135	115-142	4'10"
87-115	95-123	103-131	111-139	119-147	4'11"
90-119	98-127	106-135	114-143	123-152	5'0"
93-123	101-131	110-140	118-148	127-157	5'1"
96-127	105-136	113-144	122-153	131-163	5'2"
99-131	108-140	117-149	126-158	135-168	5'3"
102-135	112-145	121-154	130-163	140-173	5'4"
106-140	115-149	125-159	134-168	144-179	5'5"
109-144	119-154	129-164	138-174	148-184	5'6"
112-148	122-159	133-169	143-179	153-190	5'7"
116-153	126-163	137-174	147-184	158-196	5'8"
119-157	130-168	141-179	151-190	162-201	5'9"
122-162	134-173	145-184	156-195	167-207	5'10"
126-167	137-178	149-190	160-201	172-213	5'11"
129-171	141-183	153-195	165-207	177-219	6'0"
133-176	145-188	157-200	169-213	182-225	6'1"
137-181	149-194	162-206	174-219	187-232	6'2"
141-186	153-199	166-212	179-225	192-238	6'3"
144-191	157-205	171-218	184-231	197-244	6'4"

The weight ranges, in pounds, are for a person not wearing shoes or other clothing.

4. Emotional stability assuring compliance with a rather rigid postoperative regimen and follow-up requirement.

5. Co-existent conditions which would be improved by a significant, irreversible weight loss. These are: hypertension, diabetes, hyperlipidemia, gout, orthopedic problems affecting the back, hips and knees, sleep apnea, chronic respiratory insufficiency (Pickwickian Syndrome).

6. Socio-economical and psychological factors affecting work, school, employment, personal-family-and marital-life.

Clinical evaluation is performed as a rule on outpatient/preadmission basis and includes medical history and physical examination, chest x-ray, gallbladder and stomach x-rays, ultrasonography of the gallbladder when appropriate, chemistry profile, serum thyroxin

and a 3 hour glucose tolerance test. Selectively, we may order an electrocardiogram, pulmonary function test, and barium enema. As we mentioned earlier, abnormalities found on these test constitute additional indications for planned operation, and also allow proper pre- and post-operative management in these difficult but ultimately very gratifying patients.

Stomach bypass and all other weight-loss operations are par-excellence elective procedures, thus we spend considerable length of time (several months) to evaluate the patient and obtain the necessary financial pre-authorization from the Health Insurance Company or other third-party payor. During that time we meet with the patient on more than one occasion, asking to bring along a spouse, parent or other involved individual, and make an effort both to gain insight into the

candidate's personality, motivation, family situation and prospect for support, as well as to inform him or her of the post-operative management and life-long restrictions imposed by the stomach bypass. In our community we have an active support group of patients who had this type of surgery and we require that our candidates attend at least one of this organization's meetings. The candidates invariably find these meetings both interesting and very informative.

Nebraska Physicians' Infant Feeding Recommendations

INFANT feeding patterns have changed markedly in the past four decades. These changes are a reflection of knowledge about infant nutritional needs and the recommendations which are designed to help parents meet those needs. While parental compliance with physician advice-giving may not always be complete, the physician providing pediatric care can exert a strong influence on subsequent family feeding behavior.¹

Rapid change in recommended feeding patterns, however, has resulted in confusion for both parents and the health practitioners whose advice they seek.²⁻⁴ Previous evaluation of Nebraska physician's attitudes and practices⁵ suggested incomplete agreement with American Academy of Pediatrics guidelines.⁶

In an effort to learn what attitudes and infant feeding practices currently characterize Nebraska physicians, a statewide mail survey was conducted in 1985. After obtaining approval by the University of Nebraska Institutional Review Board for the Protection of Human Subjects, a two-page anonymous questionnaire was mailed to all Nebraska practicing physicians identified as general or family practitioners or pediatricians. One week following the initial mailing, a reminder postcard was mailed. Of the original group of 463 physicians, 42 individuals were removed from the sample because they were retired, they did not see pediatric patients, or because they had moved and no forwarding address was available.

References

1. Andres R. et al.: Impact of age on weight goals *Ann. Int. Med.* 1985; 103 (Dec., part 2) 1030-1033.
2. Reinhold R.: Critical analysis of long term weight loss following gastric bypass. *S. G. & O.* 1982; 155 (Sept) 385-394.
3. Table I and Table III: Reproduced in *Science*, May, 1985.
4. Table II: Published in the *Des Moines Register*, March 2, 1983.
5. Griffen W. O., Jr.: Gastric Bypass for Morbid Obesity *Surgical Clinics of N. Am.* 1979;59 (Dec.) 1103-1112.

KATHLEEN G. AUERBACH, PH.D., I.B.C.L.C.

Departments of Pediatrics and Obstetrics-Gynecology,
University of Chicago Medical Center, Chicago, IL
60637

JOHN WALBURN, M.D.*

Department of Pediatrics, University of Nebraska
Medical Center, Omaha, NE 68105

The remaining physicians totaled 421. 287 (60%) of the physicians successfully contacted completed and returned the survey instrument.

Sample Population

Among the general practitioners, 81 percent identified how much of their practice was devoted to pediatrics. The range of pediatric care provided by these general physicians was 5-75 percent (median: 25 percent; mean 27 percent).

Comparison of those invited and those who responded to the survey revealed that nearly all (96%) of Nebraska non-board certified general physicians responded, as did most (74%) non-board certified pediatricians. By contrast, only 55 percent of board certified family physicians and 45 percent of board

*For reprints, write John Walburn, M.D., Department of Pediatrics, University of Nebraska Medical Center, Omaha, NE 68105.

certified pediatricians participated in the survey. Thus, these findings may under-represent the board certified practitioners who provide pediatric care in Nebraska.

Non-board certified general physicians were, as a group, older than other respondents; for example, 40 percent were 51 years or older compared to nearly 60 percent of the board certified family practitioners and nearly half of the pediatricians, who were less than forty years old. Non-board certified general physicians had been practicing in the same community an average of 15 years, compared with board certified family practitioners (12 years), non-board certified pediatricians (10 years), and board certified pediatricians (13 years).

General practitioners are more likely to have solo practices or a single partner compared with pediatricians, who are more likely to have three or more partners. Such practice size differences are related, in part, to practice location. Regardless of board certification, nearly 60 percent of general physicians practiced in towns with fewer than 10,000 people; 70 percent of pediatricians practiced in the two cities with greater than 100,000 people.

The respondents mirror the distribution of medical specialists practicing pediatrics throughout the state, insofar as 79 percent of the physicians contacted were general practitioners, and 79 percent of the respondents also practiced general medicine. In addition, distribution of the invited physician population in Nebraska and the subsequent respondent sample was statistically similar. (See Table 1).

TABLE 1

Distribution of Nebraska physicians by size of towns and distribution of the respondent group in percent.

Population of Nebraska towns*	Distribution of Physicians in Nebraska	Distribution of Respondent Physicians
Fewer than 5,000	28	30
5,000-9,999	15	14
10,000-19,999	7	5
20,000-29,999	8	13
30,000-99,999	4	5
100,000 or more	38	33

*According to 1980 U.S. Census data.

Results

1) Physician attitudes relating to infant feeding

Questions relating to attitudes about infant feeding from a previous survey of Nebraska physicians were replicated in this study. In the earlier survey slightly more than one-third of the respondents thought that multi-vitamin supplements should be prescribed for infants receiving commercially-prepared formulas. Of the current respondent group, a larger percentage (43%) (and an even larger proportion of the general physicians segment) held that such vitamins should be prescribed. In the 1978 survey, 83% of the respondents agreed that fluoride supplements should be offered when the water supply was not fluoridated; among the current respondent group, 94% agreed with the statement. In contrast, fewer respondents in the current survey agreed with the remaining statements, thus conforming more closely to AAP guidelines regarding infant feeding recommendations.

Based on the results of the current survey, it appears that the majority of Nebraska physicians agree with most AAP recommendations concerning infant nutrition. For example, a majority of the physicians polled agree with American Academy statements regarding multi-vitamin use for bottle-feeding babies receiving formula, the inappropriateness of early solid foods, the inappropriateness of using evaporated milk formulas or undiluted cow's milk, and the need for fluoride in areas without fluoridated water.⁷ In all cases, reported concurrence with AAP guidelines was higher among pediatricians than among general physicians, although these differences were not statistically significant. (See Table 2.) Only on the issue of vitamin D supplements⁸ for breastfeeding babies did a majority of Nebraska physicians disagree with AAP guidelines.

Attitudes relating to the use of early solid foods to reduce night waking also differed according to both the respondents' specialty and board certification. Only 21% of pediatricians agreed that solid foods will help babies sleep. Board certified physicians also were more likely (69%) than their non-board certified colleagues (56%) to disagree that early solids will encourage the baby to sleep through the night. (See Table 3).

TABLE 2
Percent of physicians agreeing with infant feeding attitude statements
in 1978 and in 1985

Attitude Statement	1978* Survey	General Physician	Pediatrician	1985 Total
Multi-vitamin supplements should be prescribed for most infants receiving commercially prepared formulas.	37	47	31	43
It is desirable to give Vitamin D supplements to breastfed infants.	62	41	27	38
One advantage of adding solid food to the diet very early is that it helps the baby sleep through the night.	40	39	21	35
Evaporated milk formulas can be made as nutritionally adequate as commercially prepared infant formulas.	59	32	31	32
Undiluted cow's milk is as satisfactory for feeding the newborn infant as commercial or home-prepared formula.	12	7	2	6
Infants whose water supply is not fluoridated should receive a fluoride supplement.	83	92	100	94

*From Milton and Fox, 1978

TABLE 3
Attitudes regarding the appropriateness of early solid foods to reduce night waking
by medical specialty and board certification in percent

Physician Attitude Expressed	General Physicians		Pediatricians		Total
	Non-Board Certified	Board Certified	Non-Board Certified	Board Certified	
Agree	53	32	17	23	35
Disagree	47	68	83	77	65

Chi-square significance

By medical specialty only:	p<.02
By board certification only:	p<.05
By specialty and certification:	p<.01

2) Reported infant feeding recommendations

In addition to expressed attitudes relating to infant feeding, the respondents also were asked to report their actual infant feeding recommendations for bottle-feeding and breastfeeding infants. Three variables were found to most frequently influence reported practice recommendations: medical specialty, board certification, and physician's age, which correlated closely with the timing of receipt of the MD degree.

a) Recommendations for bottlefeeding infants

All physicians reported recommending the use of commercial formulas for bottle-feeding infants. Two-thirds of the respondents reported recommending iron-fortified formula. Recommendations to use iron-fortified formula

for bottle-feeding infants were unrelated to medical specialty, board certification, or physician's age.

Although the AAP recommends against using vitamin supplements when bottle-feeding infants are receiving commercial formula, nearly three-fourths of these Nebraska respondents reported recommending vitamin supplements for their bottle-feeding pediatric patients. Board certification did not influence this pattern; however, medical specialty and physician's age did. For example, 80% of general physicians, but only 51% of pediatricians reported recommending the use of supplemental vitamins. (See Table 4) As the physician's age increased, the likelihood of recommending vitamin supplements for formula-fed infants also increased. (See Table 6.)

The majority of the respondents surveyed supported AAP recommendations regarding the age of appropriate solid food introduction. Medical specialty, but not board certification, influenced these recommendations. For example, general physicians were more than twice as likely as pediatricians to recommend introducing solid foods at 10 weeks or earlier, and one-third less likely than pediatricians to delay solids until 16 weeks among bottle-fed babies. (See Table 4.) In addition, the physician's age influenced the recommended timing of solid food introduction. Among physicians forty-one years of age or younger, 81% recommended delaying solids until 16 weeks; this compares with 46% of physicians 41-50 years old, and 30% of physicians older than fifty who made the same recommendations. (See Table 6.)

The AAP recommends against the use of whole cow's milk for infants until the second half of the baby's first year. Only 28% of these physicians reported waiting until the bottle-

feeding infant was 7 months old before recommending introduction of whole cow's milk. Board certification influenced this finding to a greater degree than did medical specialty. Non-board certified and general practitioners were half again as likely as their board certified and pediatric colleagues to recommend giving whole cow's milk to bottle-feeding babies younger than seven months. (See Tables 4 and 5.)

b) Recommendations for breastfeeding infants

The majority of the physicians reported that 60-70% of infants in their practices were breastfed. Most of these physicians also reported recommending water supplementation to breastfeeding infants. Pediatricians are less likely to do so than general practitioners, and young physicians are much less likely to do so than are older physicians. (See Tables 4 and 6.)

With the exception of non-board certified

TABLE 4
Medical Specialty and Infant Feeding Recommendations in percent

Infant Recommendations	General/Family	Pediatrics	Chi-square Significance
Give vitamin supplements to bottle-feeding babies . . .			
Yes	80	51	<.001
No	20	49	<.05
Introduce solid foods to bottle-feeding babies . . .			
Younger than 10 weeks	27	12	<.05
10-15 weeks	23	12	
16 weeks or older	50	75	
Introduce whole cow milk to bottle-feeding babies . . .			
Younger than 31 weeks	39	24	<.10>.05
31-50 weeks	33	47	
51 weeks or older	28	29	
Give water supplements to breastfeeding babies . . .			
1 week of age or younger	43	29	<.01
Older than 1 week	19	8	
No	38	63	
Introduce solid foods to breastfeeding babies . . .			
Younger than 10 weeks	24	10	<.10>.05
10-15 weeks	20	10	
16 weeks or older	55	80	
Introduce whole cow milk to breastfeeding babies . . .			
Younger than 31 weeks	34	23	n.s.
31-50 weeks	20	36	
51 weeks or older	46	40	
Wean the breastfeeding baby . . .			
Younger than 31 weeks	18	13	n.s.
31-50 weeks	30	19	
51 weeks or older	52	68	

general practitioners, the majority of the respondents recommended delaying solid foods to breastfeeding infants until 16 weeks or later. Board certification did not influence the timing of recommendations to introduce solid foods, and medical specialty was only marginally predictive. However, as the physician's age increased, the timing of such recommendations tended to occur earlier. (See Table 6.)

The physicians surveyed tended to recommend introducing whole cow's milk to breastfeeding babies in the latter half of the first year, or near the infant's first birthday. Only the physician's age influenced the timing of such recommendations. (See Table 6.)

Most of these Nebraska physicians reported delaying recommended weaning from the breast until near the end of the first year or later. Physician's age and board certification affected this recommendation, with board certified physicians less likely (9%) than non-board certified physicians (26%), and young

physicians least likely to recommend weaning the baby from the breast younger than 31 weeks. (See Table 6.)

Discussion

Except in their attitude that vitamin D supplements are not necessary for breastfeeding babies, the majority of surveyed Nebraska physicians providing pediatric care express attitudes in general agreement with AAP recommendations relating to infant feeding. Most Nebraska physicians' reported infant feeding recommendations also reflect published American Academy of Pediatrics guidelines for such caregiving. However, some practices do not support these guidelines.

For example, 35% of these physicians continue to support the expectation that early introduction of solid foods will reduce infant night waking, in spite of published reports showing no such relationship.^{9, 10} Many of these Nebraska practitioners also reported making recommendations relating to supple-

TABLE 5
Board Certification and Infant Feeding Recommendations in percent

Infant Feeding Recommendations	Board Certification Yes	No	Chi-square Significance
Give vitamins to breastfeeding babies . . .			
Yes	75	71	n.s.
No	25	21	
Introduce solid foods to bottle-feeding babies . . .			
Younger than 10 weeks	20	31	n.s.
10-15 weeks	18	24	
16 weeks or older	62	42	
Introduce whole cow milk to bottle-feeding babies . . .			
Younger than 31 weeks	30	46	<.05
31-50 weeks	40	27	
51 weeks or older	30	27	
Give water supplements to breastfeeding babies . . .			
1 week of age or younger	40	40	<.10>.05
Older than 1 week of age	13	23	
No	47	36	
Introduce solid foods to breastfeeding babies . . .			
Younger than 10 weeks	22	20	n.s.
10-15 weeks	15	24	
16 weeks or older	63	56	
Introduce whole cow milk to breastfeeding babies . . .			
Younger than 31 weeks	28	37	n.s.
31-50 weeks	23	23	
51 weeks or older	47	40	
Wean the breastfeeding baby . . .			
Younger than 31 weeks	9	26	<.01
31-50 weeks	35	18	
51 weeks or older	56	56	

mental vitamins for bottle-feeding babies, thereby contradicting by their reported actions their own attitudes regarding the need for such vitamins. Significantly, such contradiction with expressed attitudes was more likely as the age of the physician increased, particularly among general practitioners. Reported recommendations relating to the timing of introducing solid foods to bottle-feeding babies also reflected differences by medical specialty and physician's age.

Too early introduction of whole cow's milk to breast- and bottle-feeding babies may be a form of false economy, insofar as this food is considered lacking in certain vitamins and minerals deemed necessary for infants under one year of age.¹¹ In addition, whole cow's milk has been linked to onset of allergies^{12, 13} and colic.¹⁴ Yet, recommending the use of whole cow's milk before the infant's seventh month of life was mentioned by about one-third of all the respondents regardless of infant feeding method.

Bottle-feeding babies are not the only ones for whom some feeding recommendations may not be appropriate. Although the majority of newborns¹⁵ in these physicians' practices initially were breastfed, water supplementation in the first week of life was recommended by 40% of the respondents. Medical specialty, board certification, and physician's age influenced the likelihood of occurrence of such a practice in the face of increasing evidence that such supplementation is inappropriate and may actually interfere with successful breastfeeding. For example, de Carvalho, et al, have noted that water supplementation has no effect on breastfeeding infants with physiologic jaundice.¹⁶ Nicoll, Ginsburg, and Tripp have reported that as the amount of water supplementation increased, levels of hyperbilirubinemia among breastfeeding babies also increased.¹⁷ In addition, nipple confusion¹⁸⁻²⁰ is much more likely to occur when newborns are exposed to rubber bottle nipples with water and/or formula supplementation, particularly in the first week of life.

TABLE 6
Physician's Age and Infant Feeding Recommendations in percent

Infant Feeding Recommendations	Younger than 41 years	41-50 years	51 years or older	Chi-square Significance
Give vitamin supplements to bottle-feeding babies . . .				
Yes	68	74	87	<.01
No	32	26	13	
Introduce solid foods to bottle-feeding babies . . .				
Younger than 10 weeks	7	29	42	<.001
10-15 weeks	12	25	28	
16 weeks or older	81	46	30	
Introduce whole cow milk to bottle-feeding babies . . .				
Younger than 31 weeks	5	7	9	n.s.
31-50 weeks	19	18	25	
51 weeks or older	76	75	66	
Give water supplements to breastfeeding babies . . .				
1 week of age or younger	25	50	46	<.001
Older than 1 week	12	10	19	
No	63	40	35	
Introduce solid foods to breastfeeding babies . . .				
Younger than 10 weeks	5	13	42	<.001
10-15 weeks	9	32	23	
16 weeks or older	86	55	35	
Introduce whole cow milk to breastfeeding babies . . .				
Younger than 31 weeks	21	32	48	<.01
31-50 weeks	23	35	19	
51 weeks or older	57	32	33	
Wean the breastfeeding baby . . .				
Younger than 31 weeks	14	42	20	<.01
31-50 weeks	21	19	37	
51 weeks or later	65	39	43	

Most of the responding physicians do recommend delaying the introduction of solid foods to breastfeeding infants, thereby reducing the likelihood of problems relating to its early introduction.²¹ Recommendations related to the early introduction of both solid food and whole cow's milk were more strongly related to the physician's age than to the medical specialty or board certification, in contrast to the timing of physician recommendations to wean the breastfeeding baby, which was influenced by the practitioner's age and board certification.

Summary

In reviewing the implications of the influence of medical specialty and board certification on infant feeding attitudes and recommendations reported by Nebraska family practitioners and pediatricians, we conclude that postgraduate medical training may be a sensitizing agent among these Nebraska physicians to current AAP infant feeding recommendations. However, the influence of the physician's age, so closely correlated with the timing of the receipt of the MD degree, suggests that many physicians in Nebraska continue to practice medicine as they first were taught it. Continuing education relating to infant feeding knowledge may be inadequately utilized. What remains to be seen is whether a similar pattern of infant feeding caregiving exists in other areas of the United States, and how effectively updated infant feeding information can be disseminated through journal articles, conferences, in-service programs, and residency training programs to the Nebraska general physicians and pediatricians providing medical care for infants and young children.

References

1. Sarett HP, Bain KR, O'Leary JC: Decisions on breast-feeding or formula feeding and trends in infant-feeding practices. *Am J Dis Child* 1983; 137:719-25.
2. Poskitt EME: Infant feeding: a review. *Human Nutr Appl Nutr* 1983; 37A: 271-86.
3. Brogan BD, Fox HM: Infant feeding practices of low and middle-income families in Nebraska. *J Am Diet Assoc* 1984; 84:560-67.
4. Fomon SJ: What are infants fed in the United States? *Pediatrics* 1975; 56:350-54.
5. Milton SE, Fox HM: Nebraska physicians' attitudes and practices in the field of infant feeding and nutrition. *J Am Diet Assoc* 1978; 73:416-19.
6. Committee on Nutrition: *Pediatric Nutrition Handbook*. Evanston, IL: American Academy of Pediatrics, 1985.
7. Margolis FJ et al: Fluoride supplements for children. *Am J Dis Child* 1980; 134:865-68.
8. Ala-Houhala M: 25-hydroxyvitamin D levels during breastfeeding with or without maternal or infantile supplementation of vitamin D. *J Pediatr Gastroenterol Nutr* 1985; 4:220-26.
9. Grundwaldt E, Bates T, Guthrie D: The onset of sleeping through the night in infancy. *Pediatrics* 1960; 26:667-68.
10. Beal VA: Termination of night feeding in infancy. *J Pediatr* 1969; 75:690-92.
11. Committee on Nutrition: The use of whole cow's milk in infancy. *Pediatrics* 1983; 72:253-55.
12. Oski FA: Is bovine milk a health hazard? *Pediatrics* 1985; 75 (Suppl):182-86.
13. Grulee LG, Sanford HN: The influence of breast and artificial feeding on infantile eczema. *J Pediatr* 1936; 9:223-25.
14. Lothe L, Lindberg T, Jakobsson I: Cow's milk formula as a cause of infantile colic: a double-blind study. *Pediatrics* 70:7-10, 1982.
15. Forman MR, Fetterly K, Graubard BI: Exclusive breast-feeding of newborns among married women in the United States: the National Natality Surveys of 1969 and 1980. *Am J Clin Nutr* 1985; 42:864-69.
16. de Carvahio M, Klaus MH, Merkatz RB: Frequency of breastfeeding and serum bilirubin concentration. *Am J Dis Child* 1982; 136:737-38.
17. Nicoll A, Ginsburg R, Tripp JH: Supplementary feeding and jaundice in newborns. *Acta Paediatrica Scand* 1982; 71:759-61.
18. Neifert MA, Seacat JM: Contemporary breast-feeding management. *Clin Perinatol* 1985; 12:319-42.
19. Marmet C, Shell E: Training neonates to suck correctly. *MCN* 1984; 9:401-7.
20. Neifert MA, Seacat JM: Medical management of successful breastfeeding. *Pediatr Clin North Am* 1986; 33:743-62.
21. Quandt SA: The effect of beikost on the diet of breast-fed infants. *J Am Diet Assoc* 1984; 84:47-51.

PERINATAL PAGE

"The Use of Rh-Immune Globulin"

THE routine use of Rh-immune globulin (RHIG) to prevent the problems associated with Rh-isoimmunization has contributed to a significant decline in perinatal deaths in the United States related to this disease entity. Reports have shown infant mortality associated with Rh-hemolytic disease to be from 2.7 to .9/10,000 live births in the decade after its introduction in 1967.¹ The August, 1984 ACOG Bulletin pointed out that the reasons for failure of Rh-immune globulin relate primarily to physician error and laboratory error.² A surprising 18% of all patients eligible for RHIG do not receive it.³ For this reason, clinicians must be constantly aware of the potential causes and clinical situations where Rh-isoimmunization may take place. As little as .1 cc of fetal Rh-(D) cells can initiate an isoimmune response in the maternal organism.

Situations where Rh-immune globulin should be administered to a RH-(D) negative mother include:

- (1) After delivery of a D or DU positive infant.
- (2) After antepartum hemorrhage, with confirmation of fetal-maternal bleed by Kleihauer Betke stain.
- (3) After abortion, spontaneous or voluntary.
- (4) After ectopic pregnancies.
- (5) After amniocentesis in second or third trimester.
- (6) After a fetal death when delivery is not immediately anticipated.
- (7) After molar evacuation.
- (8) After Rh-(D)-positive blood transfusion, inadvertently or planned.
- (9) After platelet transfusion, if Rh-positive platelet donors are employed.
- (10) After postpartum/postabortal sterilization.
- (11) Prophylaxis in Rh-negative women at 28 weeks gestation.^{4,5}

There is some discussion about several of the above listed risk areas. The reader might seek further discussion in the cited review.

J. PATRICK LAVERY, M.D.

Associate Professor, Dept. OB/GYN, University of Louisville, Louisville, KY 40292

A most disturbing reason for possible Rh-isoimmunization is related to laboratory error. Problems with prenatal Rh typing occurs in approximately 2 to 3% of all cases. Confidence and awareness of laboratory efforts should be made by all practicing clinicians, and quality control practices should be employed at the institutions.⁶

Physician awareness must likewise be intensified. Constant vigilance must be maintained in all patients at risk, not just the "routine" term deliveries.

The American College of Obstetricians and Gynecologists endorsed the statement that "the establishment of Rh-immune globulin antenatal prophylaxis programs is now recommended."⁷ On the basis of this recommendation, many physicians have initiated practices of antenatal administration of RHIG. Bowman and Pollack produced data several years ago on the efficacy of this procedure. Extensive clinical trials showed that expected incidence of sensitization was 14 patients out of 1,084 women treated. The actual incidence of sensitization with prophylaxis was two.⁸ This was a statistically significant difference for the population so treated. Arguments do exist, however, to the contrary, and question whether blanket antepartum Rh-immune globulin should be administered based on the economic cost and the potential risk to those subjects who receive it with a benefit to only a few.⁹ A suggested option, however, is that only primigravidas should be selected to receive prophylactic RHIG.

Physician, laboratory, and nursing failure

are obstacles which must be surmounted in our quest to eradicate Rh-isoimmunization as a major disturbing clinical entity. Only then will the disease reach near total eradication.

References

1. Wysowski DK, et al. Rh-Hemolytic Disease. JAMA 242:1376-79, 1979.
2. ACOG Technical Bulletin, Prevention of Rh (D) Isoimmunization, Number 79, August 1984.
3. ACOG Technical Bulletin Number 61, March 1981.
4. Lavery JP. Rh (D) Immune Globulin: When to Use It In the Rh (D) Negative Mother. Postgraduate Medicine 75:259-264, 1984.
5. Caiola G. Efforts should be made to eradicate Rh-Hemolytic Disease of the fetus and newborn. Ob Gyn Survey 39:55, 1984.
6. Schmidt PJ, et al. Prenatal Rh-typing errors. Am J Obstet Gynecol 145:884, 1983.
7. ACOG Technical Bulletin Update, Number 61, November 1983.
8. Bowman JM, Pollock JM. Antenatal prophylaxis of Rh-isoimmunization. Canadian Med Assoc J 118:627, 1978.
9. Hensleigh PA. Preventing Rh-isoimmunization. Am J Obstet Gynecol 146:749, 1983.

President's Page

I wish to devote this last president's (Immediate Past) message to express appreciation to those people who have worked so diligently to keep our association functioning smoothly and continuing to progress.

The 119th Annual Session was dedicated in honor of Ken Neff, and paid tribute to his thirty-three years service to our association as assistant and then, executive director of the N.M.A. The officers of the N.M.A. serve only a relatively short time, and it is through the executive director and assistant director that the essential continuity of the N.M.A. programs progress. Ken did an excellent job during his tenure, and I again wish to thank him for his efforts and wish him the best in his new position.

Bill Schellpeper had twenty-five years of experience with the N.M.A. when he stepped in as our new executive director. We are extremely fortunate to have such a highly qualified and capable individual to manage our association as executive director. The search committee for our new assistant director is to be complimented on the selection of James Ruigh for the position. Jim has only been on board since January 1, 1987, but has been very impressive in his ability to handle the job.

The office staff — Mary, Bobbie, Janet and Sue are all so very courteous and helpful on any calls to the association office, and it is always a pleasure to work with them. I admire their dedication and efficiency.



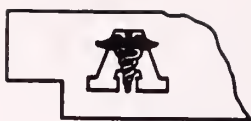
Hiram R. Walker, M.D.

I wish to thank all the commission and committee chairmen and members for their dedicated efforts this past year in handling and making decisions on so many matters affecting the association.

I appreciate the honor of having served as your president for the past year, and Suz and I wish to thank you for your support.

I want to express my best wishes to Dr. Dwight Cherry, our extremely well qualified new N.M.A. President, for a successful year, and assure him of the support of the members of the association.

H. R. Walker, M.D.
Immediate Past President



The Auxiliary

"Auxilians in Action" has been our theme and our goal to visit every organized Auxiliary has been met as well as several Member-at-Large events. Thanks so much to our hostesses and to all the wonderful new friends we have made across the state.

Another of our goals was to start a Legislative Key Contact Program. This has been started in most districts. Under the leadership of Susie Forker, our Legislative Day this year was very special. Governor Orr paid us a visit as well as Senators Rupp and Wesley. Most important was some of our physicians were in attendance.

At the AMA Auxiliary Convention in June, NMA Auxiliary will receive a special membership award for 99% unified membership. We have 775+ regular members, 21 residents and 1 student member. Thanks to all for a job well done.

Our Health Projects committee has done a great job promoting projects across the state. Linda Brown has written two very good Health Projects newsletters.

Dr. Day was well received and promoted around the state. Thanks Jill.

One of our main goals this year was to improve communications. It has been accomplished, thanks to Elba Lau, Linda Brown, Dr. Forker and the Staff of the NMA office. It has been terrific!

Our two state-wide fund raisers AMA-ERF and NMF continue to raise more money to provide support for our medical schools and the future of medicine.

As you can tell, Nebraska Auxilians have been in action. Each and every Auxilian is important to our organization and each contributes in their own way. Thanks a million to everyone who has made this year such a success. I am very proud of all of you.

Please plan to attend the Convention April 27-28 at the Cornhusker Hotel in Lincoln. We will have the slide show and county exhibits to share ideas and projects. See you there!!!!

Bev Kruger
NMAA President

NEBRASKA MEDICAL ASSOCIATION AUXILIARY ANNUAL STATE MEETING, APRIL 24 AND APRIL 25, 1987

WHEREAS, we consider it fitting and proper to express our thanks to all who have contributed to the success of the Convention and the accomplishments of the past year, therefore be it

RESOLVED, that we, the members of the Nebraska Medical Association Auxiliary, extend our sincere thanks and appreciation to the officers and other members of the Nebraska Medical Association Auxiliary Executive Board who have so ably carried on the business necessary for the proper functioning of our organization; and be it further

RESOLVED, that our thanks and appreci-

ation go to the members of the Lancaster County Auxiliary, hostess to this, the sixty-second Annual Meeting, for the gracious hospitality extended to all of us; and be it further

RESOLVED, that we are very pleased that Virginia Kutiat, Treasurer, American Medical Association Auxiliary, found it possible to meet with us; and be it further

RESOLVED, that we declare particular gratitude to the President of Lancaster County Auxiliary, Joyce Urbauer, Convention Chairman, Gloria Ebers, to Co-Chairman, Lois Larson, to their capable committee and to all

who thoughtfully planned for our entertainment and pleasure; and be it further

RESOLVED, that the Nebraska Medical Association be advised that we appreciate their assistance and leadership, that in particular we thank Dr. Hiram Walker, President of The Nebraska Medical Association, and the Commission on Association Affairs for their help and advice throughout the year, and that specifically we appreciate them sharing with us portions of their programs and giving us the opportunity to attend the Commission on Legislation & Governmental Affairs, the Commission on Public Affairs, the Ad-Hoc Committee on Maternal & Child Health and the Ad-Hoc Committee on Health Education and be it further

RESOLVED, that we express our sincere thanks to Dr. Alan Forker, Editor of the Nebraska Medical Journal; Elba Lau, Editor of the NMAA Newsletter; Nebraska Medical

Liability Mutual, who provides monetary support; Mr. Kenneth Neff, former Executive Secretary of the Nebraska Medical Association; Mr. William Schellpeper, current Executive Secretary; Mr. James Rule, Assistant Executive Secretary; and the Nebraska Medical Association Office personnel, who in their respective roles, provide efficient and ready assistance in the communication of Auxiliary news; and be it further

RESOLVED, that we pledge our loyalty and devotion to the Nebraska Medical Association Auxiliary, and our continued faithfulness in supporting its activities, promoting its projects and protecting its reputation and high ideals; and be it finally

RESOLVED, that these resolutions be published in the NEBRASKA MEDICAL JOURNAL.

Respectfully submitted,
Mrs. John A. Haggstrom

Letter to the Editor

I am submitting to you a bit of University of Nebraska Medical College history that is not well known but may be of interest to a number of alumni. It pertains to the origins of the University of Nebraska Family Practice Review Course. That course has been and remains one of the premier educational programs in the country for family physicians. Its 100 hour, two week schedule is rigorous but it provides participants with in-depth coverage of many complex diagnostic and management problems. The course is attended by many family physicians preparing for American Board of Family Practice recertification but it also appeals to others in search of a systematic approach to upgrading their practice skills.

When the review course was planned early in 1970, the principal goal of the founders was to provide a program which was thorough in its approach to problem solving. It was not the intent of the group to produce a veneer of superficial acquaintance with topics but to

provide participants with substantial understandings which could be used in logical fashion not only in the topic being studied but in other areas. It appears that founding goal has been well preserved.

The group that planned the origins of the review course was assembled by Dr. Frank Land, the then Chairman of the Family Practice Program at Nebraska. Frank had come to Omaha in 1969 from Fort Wayne, Indiana via Washington, D.C. where he had been in the Johnson administration in the Department of Health, Education and Welfare.

The first American Board of Family Practice examination was held in February 1970. Soon thereafter, Frank called on three colleagues to discuss the nature of an examination review program and the form which it should take. We agreed to meet in Grand Island at the Yancey Hotel. At the Yancey, we locked ourselves into a suite of rooms for two days working 18 hours

a day until we had outlined the program goals, objectives and form. John Finnegan traveled from Lexington, Ivan French from Wahoo, Frank Land from Omaha and I from Friend.

Not only was the program outlined but areas of emphasis were specified. We felt that understanding the pathophysiology of a disease process was critical and drug interactions and effects were to be carefully presented. The topics were arranged so as to avoid the all too common educational experience of subject sequence disassociation. A preferred faculty was selected for the first programs. I understand that some of that original faculty still participates.

It's been seventeen years since that program was set up and it's still running. That's very gratifying to those of us involved at the beginning. Our dear friends Frank Land and John Finnegan are gone but this program is a monument to their foresight and devotion to the quality of education received by family physicians. I am fortunate to have had the opportunity to work with such fine men as Frank Land, John Finnegan and Ivan French.

V. Franklin Colon, M.D.
Director, Family Practice
Residency Program
Bethesda Hospital
619 Oak St.
Cincinnati, Ohio 45206

Welcome New Members

Paul Plessman, M.D. (reinstated)
311 Jackson Ave.
Seward, NE 68434

Patricia J. Eastman, M.D.
12th & Erie
Lexington, NE 68850

Eric D. Kater, M.D.
4002 Avenue B
Scottsbluff, NE 69361

Mohammad Al-Turk, M.D.
UNMC - 42nd & Dewey
Omaha, NE 68105

Michael Horn, M.D.
601 No. 30th
Omaha, NE 68131

Judith K. Stern, M.D.
650 Doctors Bldg., N. Tower
Omaha, NE 68131

John H. Post, M.D.
1320 S Street
Bridgeport, NE 69336

Gary W. Barth, M.D.
620 N. Denver
Hastings, NE 68901

Lanette Guthmann, M.D.
10060 Regency Cir.
Omaha, NE 68114

James K. Blomgren, M.D.
600 N. Cotner, #306
Lincoln, NE 68505

Thomas A. Brewer, M.D.
5440 So. St.
Lincoln, NE 68506

Krynn K. Buckley, M.D.
6911 Van Dorn
Lincoln, NE 68506

John F. Buckley, M.D.
301 So. 70th St.
Lincoln, NE 68510

Yvonne K. Davenport, M.D.
1530 So. 70th, #100
Lincoln, NE 68506

Mark J. Domet, M.D.
P.O. Box 81009
Lincoln, NE 68501

Kent R. Eakins, M.D.
2300 So. 16th St.
Lincoln, NE 68502

Douglas D. Ebers, M.D.
4701 Normal Blvd.
Lincoln, NE 68506

Stephen R. Grenier, M.D. (reinstated)
1732 So. 24th
Lincoln, NE 68502

Thomas M. Heiser, M.D.
P.O. Box 2636
Lincoln, NE 68502

Gary D. Milius, M.D.
5440 South St., #1100
Lincoln, NE 68506

John D. Murrell, M.D.
3560 So. 48th
Lincoln, NE 68506

Shirley A. Pflug, M.D.
UNL Student Health
Lincoln, NE 68588

Matthew C. Reckmeyer, M.D.
P.O. Box 2636
Lincoln, NE 68502

Frank J. Weirman, M.D. (reinstated)
600 N. Cotner, #306
Lincoln, NE 68505

Douglas Rennels, M.D.
601 W. Leota
North Platte, NE 69101

David Gloor, M.D.
1101 No. 10th
Beatrice, NE 68310

Bruce Schroeder, M.D.
Childrens Hospital
Omaha, NE 68114

Donald Weldon, M.D.
114 So. 6th St.
Beatrice, NE 68310

Stephen Minore, M.D.
Dept. of Anesthesiology
UNMC - 42nd & Dewey
Omaha, NE 68105

Victoria W. Smoot, M.D.
2808 No. 75th St.
Omaha, NE 68134

James H. Stageman, Jr., M.D.
Dept. of Family Practice
UNMC - 42nd & Dewey
Omaha, NE 68105

Richard D. Jackson, M.D.
510 W. 12th
Imperial, NE 69033

In Memoriam

*By medicine life may be prolong'd
yet death*

Will seize the doctor too.

—Shakespeare

THOMAS P. K. LIM, M.D. — (Born 1925 -
Died February 24, 1987) — Medical Spec-
ialty - Pulmonary Diseases. Doctor Lim was
a graduate of Yonsei University in Seoul,
Korea and practiced in Omaha. He was a
member of the Nebraska Medical Associa-
tion. Survivors include his wife, Kimberly;
daughters, Diane and Margaret of Omaha
and Elizabeth of Guilford, Connecticut;
brother Dr. Johng Lim of Eau Claire,
Wisconsin; and other family members in
Korea.

Coming Meetings

UNIVERSITY OF NEBRASKA MEDICAL CENTER

UPDATE ON GENERAL PEDIATRICS — June 28-July 2, 1987 at Jackson Hole Racquet Club, Jackson, WY. Sponsored by the Department of Pediatrics, UNMC.

SPORTS MEDICINE UPDATE 1987 — July 5-9, 1987 at the Jackson Hole Racquet Club, Jackson, WY. Sponsored by the Department of Orthopaedic Surgery and Rehabilitation, UNMC.

CARDIOVASCULAR DISEASE PREVENTION IN THE YOUNG AND THE ADULT — August 2-5, 1987 at the Snowmass Club, Snowmass, Colorado. Sponsored by UNMC.

EMERGENCY MEDICINE REVIEW — September 21-26, and October 5-10, 1987 at the Center for Continuing Education, UNMC, Omaha, NE 45 hours of ACEP Category I credit and 45 prescribed hours by the AAFP and AMA Category I.

For further information or to register for the above courses contact: Marge Adey or Brenda Ram, Center for Continuing Education, University of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, Nebraska 68105. Telephone (402) 559-4152.

UPCOMING UNMC CONTINUING EDUCATION COURSES

HEART TRANSPLANTATION IN CHILDREN AND ADULTS: PROGRESS AND CHALLENGES — May 8-9, 1987 — Holiday Inn Central, Omaha, NE. The program will address the issues and challenges facing the medical community in regards to heart transplantation. The course is designed for physicians, nurses and other health professionals involved in the treatment of patients with endstage heart failure who want to understand the role of transplantation in contemporary patient management. Enquiries regarding the program

should be made to Ms. Marge Adey, Program Coordinator, Continuing Education, ESH 3027, University of Nebraska Medical Center, 42nd at Dewey Avenue, Omaha, NE 68105-1065.

ADVANCED CARDIAC LIFE SUPPORT — May 18-19, 1987 — Initial Certification. Omaha, Nebraska. Registration Fee: \$130. 14.5 Hours AMA Category I.

ADVANCED CARDIAC LIFE SUPPORT — May 20, 1987 — Instructor Course. Omaha, Nebraska. Registration Fee: \$60. 6.0 Hours AMA Category I.

ADVANCED TRAUMA LIFE SUPPORT — March 23-24, May 28-29, September 28-29, 1987. Omaha, Nebraska. Fee: \$475. 17.0 Hours AMA Category I. 17.0 Prescribed Hours AAFP. 17.0 Hours ACEP Category I. For further information on these three courses contact Cindy S. Hanssen, University of Nebraska Medical Center, Center for Continuing Education, 42nd & Dewey Avenue, Omaha, Nebraska 68105-1065. Phone (402) 559-4152. In Nebraska, call: 800-228-1095. All other states, call: 800-228-9630.

ADVANCED CARDIAC LIFE SUPPORT — June 1, 1987 — Recertification. Omaha, Nebraska. Registration Fee: \$50. 7.2 Hours AMA Category I.

For further information, contact Ann Fitzgerald, University of Nebraska Medical Center, Center for Continuing Education, 42nd & Dewey Avenue, Omaha, Nebraska 68105-1065. Phone (402) 559-4152. In Nebraska, call: 800-228-1095. All other states (except Alaska), call: 800-228-9630.

CREIGHTON UNIVERSITY

PEDIATRIC INFECTIOUS DISEASE SYMPOSIUM — May 8-9, 1987, Boys Town Conference Center, Boys Town, Nebraska. Program Director: Dr. Steven Chartrand. 12 credit hours Category 1. Fee: TBA.

FAMILY MEDICINE UPDATE — May 22-24, 1987, Okoboji, Iowa. Program Director: Fred J. Pettid, M.D., Hours: TBA, Fee: TBA.

MAURICE E. GRIER SYMPOSIUM (OB-GYN) — June 6, 1987, Marriott Hotel, Omaha, Nebraska. Program Director: James W. Daly, M.D. Hours: TBA. Fee: TBA.

WHAT YOU NEED TO KNOW ABOUT PERINATAL ULTRASOUND — June 12-13, 1987, Holiday Inn Central, Omaha, NE. Program Director: Washington C. Hill, M.D., Hours: TBA Fee: TBA. Omaha, NE

A DAY WITH THE PERINATOLOGISTS — September 25-26, 1987, Red Lion Inn, Omaha, NE. Program Director: Washington C. Hill, M.D., Hours: TBA, Fee: TBA.

VISITING PROFESSOR SCHEDULE — 1987
May 8-9, 1987

Roland Folse, M.D., Professor and Chairman, Surgery, Southern Illinois University School of Medicine Chairman of Residency Review Committee.

September 11-12, 1987
John Cameron, M.D., Surgeon-in-Chief, The John Hopkins University, Department of Surgery, Baltimore, Maryland.

October 23-24, 1987
Hiram C. Polk, Jr., M.D., Professor and Chairman, Department of Surgery, University of Louisville, School of Medicine, Louisville, Kentucky.

For further information or to register, contact: Creighton University School of Medicine Division of CME, Omaha, NE 68178, 402-280-2550 or outside Nebraska Toll free 800-228-7212, Ext. 2550. The Creighton University School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.

LINCOLN GENERAL HOSPITAL

THE SIXTH ANNUAL CORNHUSKER/CANADIAN CLINICAL CONFERENCE — June 20-27, 1987 at Lynn Lake, Mani-

toba, Canada. Fee: \$150. For information contact: Sharlene Knippelmeyer, RN, BS, Education and Staff Development, Lincoln General Hospital, 2300 South 16th Street, Lincoln, NE 68502, (402) 473-5638.

UNIVERSITY OF KANSAS

For information concerning the following continuing education offerings sponsored by the University of Kansas Medical Center contact: Carole Rosen, Promotions Coordinator, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Boulevard, Kansas City, KS 66103 (913) 588-4480.

THIRTY-FIRST ANNUAL INFECTIOUS DISEASES SYMPOSIUM — May 1, 1987. Sponsor: University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow, Kansas City, Kansas 66103. Location: Crown Center Hotel. Credit: Category I AMA, AAFP. Contact: Eileen Buttron, University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103, (913) 588-4494.

KANSAS MEDICINE — May 15, 1987 — Sponsor: University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, KS 66103. Credit: AMA and AAFP. Location: Battenfeld Auditorium, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103. Contact: Eileen Buttron, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Blvd., Kansas City, KS 66103. 913/588-4494.

INTEROPERATIVE RADIATION: A NEW COMBINED TREATMENT APPROACH TO CANCER — July 18, 1987. Sponsored and held at by the University of Kansas Medical Center, Kansas City, Kansas. Credit: AMA, AAFP, CNE. Contact: Eileen Buttron, University of Kansas Medical Center Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103 (913) 588-4480

NUTRITION CONCERNS FOR WOMEN: A SYMPOSIUM FOR HEALTH PROFESSIONALS — September 25, 1987. Sponsored by the University of Kansas Medical Center, Kansas City, Kansas. Credit: AMA, AAFP, CNE, ADA. Contact: Eileen Buttron, University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103, (913) 588-4480.

ALLERGY, IMMUNOLOGY AND RHEUMATOLOGY: REVIEW AND UPDATE — October 9-10, 1987 at the University of Kansas Medical Center. Sponsored by the University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103. Credit: Category I AMA, AAFP. Contact: Eileen Buttron, University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103, (913) 588-4480.

MEDICINE AND RELIGION: ISSUES IN THE EIGHTIES — October 20-21, 1987 to be held at Kansas City, Kansas. Sponsored by University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103. Credit: AMA, AAFP, CNE, SW, Clergy. Contact: Eileen Buttron, University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103, (913) 588-4480.

AMERICAN FRIENDS OF THE HEBREW UNIVERSITY

HEBREW UNIVERSITY TO OFFER SUMMER MEDICAL COURSES — Jerusalem, July 5 to July 28, 1987. For the first time ever, the Hebrew University of Jerusalem will offer summer courses this year taught in English for physicians and medical students from overseas. Two courses are being offered — one in ethical and legal problems in modern medicine from a Jewish perspective and the other in medical problems specific to the Jewish people. The courses are offered by the Hebrew University-Hadassah Medical School in conjunction with the University's Rothberg School for Overseas Students. The courses will be Overseas Students. Deadline for application is May 15, 1987. For an application and further information, contact the Office of Academic Affairs of the Rothberg School for Overseas Students at 11 East 69th Street, New York, NY 10021, telephone (212) 472-2288.

SCHEDULED MEETINGS

NEBRASKA ACADEMY OF FAMILY PHYSICIANS 39th ANNUAL SCIENTIFIC ASSEMBLY — May 29 and 30, 1987 at the Holiday Inn Central, 72nd & Grover, Omaha, Nebraska. For further information contact: Phyllis Hansen, Executive Director, 401 No. 117th, #202, Omaha, NE 68154 (402) 333-5856.

140

130

120

110

100

90

80

70

60

50

40

30

20

10

0

In mild to moderate hypertension

**THE FIRST
ONCE DAILY**

**CALCIUM
CHANNEL
BLOCKER...**

NEW
ONCE DAILY



ISOPTIN[®] SR^{*}

(verapamil HCl/Knoll)

240 mg scored, sustained-release tablets



JAMES B.

38, black male, heavy smoker. Prescribed a diuretic by another physician last year for hypertension.

YOUR CONCERNS

Presents with "smoker's cough." Workup reveals a BP of 150/107.

A LOGICAL CHOICE FOR CONTROL OF HIS BP

ISOPTIN[®] (verapamil HCl/Knoll) because...

- Black hypertensives often have low plasma renin activity and generally do not respond favorably to beta blockers.
- Beta blockers may increase the likelihood of bronchospasm.

ALICE W.

65, diabetic, overweight. Her BP has elevated to 190/98.

YOUR CONCERNS

She's on daily insulin.

A LOGICAL CHOICE FOR CONTROL OF HER BP

ISOPTIN[®] (verapamil HCl/Knoll) because...

- Unlike most beta blockers and diuretics, ISOPTIN has no adverse effects on serum glucose levels.
- Unlike most beta blockers, ISOPTIN does not mask the symptoms of hypoglycemia.



THOMAS G.

70, asthmatic. In the past, BP adequately controlled with 25 mg hydrochlorothiazide daily.

YOUR CONCERNS

Today patient presents with symptoms of gout. Workup reveals high uric acid level, low serum potassium, and BP elevated to 180/98.

A LOGICAL CHOICE FOR CONTROL OF HIS BP

ISOPTIN[®] (verapamil HCl/Knoll) because...

- Unlike diuretics, ISOPTIN will not decrease serum potassium levels or elevate uric acid levels.
- Unlike beta blockers, ISOPTIN can be used safely in asthma and COPD patients.

JOHN K.

42, Annual physical uncovered diastolic BP of 102... confirmed on three successive office visits. Unresponsive to nonpharmacologic intervention.

YOUR CONCERNS

Salesman, spends many hours of his working day in car... total cholesterol level 300, HDL 35.

A LOGICAL CHOICE FOR CONTROL OF HIS BP

ISOPTIN[®] (verapamil HCl/Knoll) because...

- Unlike diuretics, ISOPTIN does not cause urinary urgency.
- Unlike either beta blockers or diuretics, ISOPTIN will not adversely affect his already seriously compromised lipid profile.
- Unlike with propranolol, fatigue and impotence are rarely reported.



**Antihypertensive therapy you
and your patients can live with**

*A product of Knoll research.

© 1986, BASF K & F Corporation

2538/2-87

Knoll Pharmaceuticals
A Unit of BASF K&F Corporation
Whippany, New Jersey 07981

BASF Group



Printed in U.S.A.
Please see adjacent page for brief summary.

In mild to moderate hypertension
THE FIRST ONCE DAILY
CALCIUM CHANNEL BLOCKER

Brief Summary

ISOPTIN® SR
(verapamil HCl/Knoll)
240 mg scored, sustained-release tablets

CONTRAINDICATIONS: 1) Severe left ventricular dysfunction (see WARNINGS). 2) Hypotension (less than 90 mmHg systolic pressure) or cardiogenic shock. 3) Sick sinus syndrome or 2nd or 3rd degree AV block (except in patients with a functioning artificial ventricular pacemaker).

WARNINGS: **Heart Failure:** ISOPTIN should be avoided in patients with severe left ventricular dysfunction (see DRUG INTERACTIONS). Patients with milder ventricular dysfunction should, if possible, be controlled before verapamil treatment. **Hypotension:** ISOPTIN (verapamil HCl) may produce occasional symptomatic hypotension. **Elevated Liver Enzymes:** Elevations of transaminases with and without concomitant elevations in alkaline phosphatase and bilirubin have been reported. Periodic monitoring of liver function in patients receiving verapamil is therefore prudent. **Accessory Bypass Tract (Wolff-Parkinson-White):** Patients with paroxysmal and/or chronic atrial flutter or atrial fibrillation and a coexisting accessory AV pathway have developed increased antegrade conduction across the accessory pathway producing a very rapid ventricular response or ventricular fibrillation after receiving intravenous verapamil. While this has not been reported with oral verapamil, it should be considered a potential risk. Treatment is usually D.C.-cardioversion. **Atrioventricular Block:** The effect of verapamil on AV conduction and the SA node may cause asymptomatic 1st degree AV block and transient bradycardia. Higher degrees of AV block, while infrequent (0.8%), may require a reduction in dosage or, in rare instances, discontinuation of verapamil HCl. Patients with Hypertrophic Cardiomyopathy (IHSS): Although verapamil has been used in the therapy of patients with IHSS, severe cardiovascular decompensation and death have been noted in this patient population.

PRECAUTIONS: **Impaired Hepatic or Renal Function:** Verapamil is highly metabolized by the liver with about 70% of an administered dose excreted in the urine. In patients with impaired hepatic or renal function verapamil should be administered cautiously and the patients monitored for abnormal prolongation of the PR interval or other signs of excessive pharmacological effects (see OVERDOSAGE).

Drug Interactions: **Beta Blockers:** Concomitant use of ISOPTIN and oral beta-adrenergic blocking agents may be beneficial in certain patients with chronic stable angina or hypertension, but available information is not sufficient to predict with confidence the effects of concurrent treatment in patients with left ventricular dysfunction or cardiac conduction abnormalities. **Digitalis:** Clinical use of verapamil in digitalized patients has shown the combination to be well tolerated if digoxin doses are properly adjusted. However, chronic verapamil treatment increases serum digoxin levels by 50 to 75% during the first week of therapy and this can result in digitalis toxicity. Upon discontinuation of ISOPTIN (verapamil HCl), the patient should be reassessed to avoid underdigitalization. **Antihypertensive Agents:** Verapamil administered concomitantly with oral antihypertensive agents (e.g., vasodilators, angiotensin-converting enzyme inhibitors, diuretics, beta blockers, prazosin) will usually have an additive effect on lowering blood pressure. Patients receiving these combinations should be appropriately monitored. **Disopyramide:** Disopyramide should not be administered within 48 hours before or 24 hours after verapamil administration. **Quinidine:** In patients with hypertrophic cardiomyopathy (IHSS), concomitant use of verapamil and quinidine resulted in significant hypotension. There has been a report of increased quinidine levels during verapamil therapy. **Nitrates:** The pharmacologic profile of verapamil and nitrates as well as clinical experience suggest beneficial interactions. **Cimetidine:** Two clinical trials have shown a lack of significant verapamil interaction with cimetidine. A third study showed cimetidine reduced verapamil clearance and increased elimination to 1/2. **Anesthetic Agents:** Verapamil may potentiate the activity of neuromuscular blocking agents and inhalation anesthetics. **Carbamazepine:** Verapamil may increase carbamazepine concentrations during combined therapy. **Ritampin:** Therapy with ritampin may markedly reduce oral verapamil bioavailability. **Lithium:** Verapamil may lower lithium levels in patient on chronic oral lithium therapy. **Carcinogenesis, Mutagenesis, Impairment of Fertility:** There was no evidence of a carcinogenic potential of verapamil administered to rats for two years. Verapamil was not mutagenic in the Ames test. Studies in female rats did not show impaired fertility. Effects on male fertility have not been determined. **Pregnancy (Category C):** There are no adequate and well-controlled studies in pregnant women. ISOPTIN crosses the placental barrier and can be detected in umbilical vein blood at delivery. This drug should be used during pregnancy, labor, and delivery, only if clearly needed. **Nursing Mothers:** ISOPTIN is excreted in human milk, therefore, nursing should be discontinued while verapamil is administered. **Pediatric Use:** Safety and efficacy of ISOPTIN in children below the age of 18 years have not been established.

ADVERSE REACTIONS: Constipation 8.4%, dizziness 3.5%, nausea 2.7%, hypotension 2.5%, edema 2.1%, headache 1.9%, CHF/pulmonary edema 1.8%, fatigue 1.7%, bradycardia 1.4%, 3° AV block 0.8%, flushing 0.1%, elevated liver enzymes (see WARNINGS). The following reactions, reported in less than 1.0% of patients, occurred under conditions (open trials, marketing experience) where a causal relationship is uncertain; they are mentioned to alert the physician to a possible relationship: angina pectoris, arthralgia and rash, AV block, blurred vision, cerebrovascular accident, chest pain, claudication, confusion, diarrhea, dry mouth, dyspnea, ecchymosis or bruising, equilibrium disorders, exanthema, gastrointestinal distress, gingival hyperplasia, gynecomastia, hair loss, hyperkeratosis, impotence, increased urination, insomnia, macules, muscle cramps, myocardial infarction, palpitations, paresthesia, psychotic symptoms, purpura (vasculitis), shakiness, somnolence, spotty menstruation, sweating, syncope, urticaria. **Treatment of Acute Cardiovascular Adverse Reactions:** Whenever severe hypotension or complete AV block occur following oral administration of verapamil, the appropriate emergency measures should be applied immediately, e.g., intravenously administered isoproterenol HCl, levalterenol bitartrate, atropine (all in the usual doses), or calcium gluconate (10% solution). If further support is necessary, inotropic agents (dopamine or dobutamine) may be administered. Actual treatment and dosage should depend on the severity and the clinical situation and the judgment and experience of the treating physician.

OVERDOSAGE: Treatment of overdosage should be supportive. Beta-adrenergic stimulation or parenteral administration of calcium solutions may increase calcium ion flux across the slow channel, and have been used effectively in treatment of deliberate overdosage with verapamil. Clinically significant hypotensive reactions or fixed high degree AV block should be treated with vasopressor agents or cardiac pacing, respectively. Asystole should be handled by the usual measures including cardiopulmonary resuscitation.

Knoll Pharmaceuticals
A Unit of BASF K&F Corporation
Whippany, New Jersey 07981



BASF Group

©1986, BASF K&F Corporation

2474/11/86

Printed in U.S.A.

AMA News Notes

The AMA has announced publication of the second edition of its *Family Medical Guide*, a thoroughly revised and updated version of the popular home medical manual that first appeared in 1982.

Published by Random House Inc., it incorporates all the important changes in treatment, diagnosis, and technology occurring in the past five years. In its first edition, the book sold 500,000 copies in its hardbound version and 2 million copies in its paperbound version.

New material covers such topics as AIDS, Alzheimer's disease, contact lenses, diets, drug abuse, home care for the sick, organ transplants, vitamin and mineral deficiencies, sports injuries, genetic counseling, plastic surgery, and medical imaging.

The AMA *Family Medical Guide* was edited by Jeffrey R.M. Kunz, M.D., former senior editor of the *Journal of the American Medical Association*, and Asher J. Finkel, M.D., former

(continued on page 19-A)



Drug/Alcohol/Emotional/Other Health Problems

HELP IS AVAILABLE
FOR YOU

FOR A MEMBER OF YOUR FAMILY
FOR A PROFESSIONAL, FRIEND OR
COLLEAGUE

Call

The Physician's Advocacy Committee
(Nebraska Medical Association)

Strictly Confidential — Professional — Effective

For information call:

402-393-3216

(You do not have to give your name.)



ORGANIZATIONS, STATE

American Cancer Society, Nebraska Division, Inc.

Don W. McClure, Exec. Vice President
8502 West Center Rd., P.O. Box 241255, Omaha 68124-5255

American Diabetes Association — Nebraska Affiliate, Inc.

Ron Van Ryswyk, Executive Director
7377 Pacific St., Ste. 216A, Omaha 68114

American Heart Association, Nebraska Affiliate

Dennis N. Nissen, Executive Director
3624 Farnam St., Omaha 68131

American Lung Association of Nebraska

8901 Indian Hills Dr., Ste. 107, Omaha 68114

American Red Cross

P.O. Box 83267
1701 "E" St., Lincoln 68501

Arthritis Foundation, Nebraska Chapter, Inc.

Mrs. Ellen Wright, Exec. Director
2229 N. 91st Court, Omaha 68134

Blue Cross and Blue Shield of Nebraska

Wm. H. Heavey, President
P.O. Box 3248, Main Station, Omaha 68180

Creighton University School of Medicine

Richard O'Brien, M.D., Dean
California at 24th St., Omaha 68178

Cystic Fibrosis Foundation, Nebraska Chapter

Charles R. Bercaw, Exec. Director
5017 Leavenworth St., Omaha 68106

Dairy Council of Central States, Inc.

Suite 103, Hillcrest Bldg.
76th & Main, Ralston 68127

Division of Rehabilitation Services

Nebraska Department of Education
6th Floor, 301 Centennial Mall South, Lincoln 68509

Division of Rehabilitation Services for the Visually Impaired

James S. Nyman, Ph.D., Director
4600 Valley Road, Lincoln 68510

Easter Seal Society of Nebraska

Mrs. Letitia K. Simmons, Executive Director
3015 North 90th St., #6, Omaha 68134

Health Manpower Referral Service, State of Nebraska

3rd Floor, State Office, 301 Centennial Mall South, Lincoln 68509

Lincoln Council on Alcoholism and Drugs, Inc.

Room 212, 215 Centennial Mall, Lincoln 68508

March of Dimes — Birth Defects Foundation

1618 L Street, Lincoln 68508

MID-PLAINS POISON CONTROL CENTER

Childrens Memorial Hospital, 8301 Dodge St., Omaha 68114
(402) 390-5400 or 800-642-9999 (toll free Nebraska)

Missouri Valley Dermatologic Society

Richard Q. Crotty, M.D., Secretary
7822 Davenport St., Omaha 68114

Muscular Dystrophy Association

1912 No. 90th St., Lower Level, Omaha 68114

National Kidney Foundation of Nebraska

Karen Engelman, Executive Director
2217 No. 91st Plaza, Omaha 68134
(402) 397-9234 — NE toll free 800-642-1255

National Multiple Sclerosis Society — Nebraska-Iowa Midlands Chapter

3624 Leavenworth, Omaha 68105

National Society to Prevent Blindness, Nebraska Affiliate

120 North 69th St., Suite 203, Omaha 68132-2720

Nebraska Academy of Ophthalmology

Mylan VanNewkirk, M.D., President
329 West 40th, Scottsbluff 69361

Nebraska Academy of Otolaryngology

Michael Crawford, M.D., President
201 Ridge St., #311, Council Bluffs, IA 51501

Nebraska Allergy Society

Linda B. Ford, M.D., President
401 E. Gold Coast Rd., Papillion 68128

Nebraska Association of Medical Assistants, Inc.

Marie Madison, President
405 East Stolley Park Rd., Grand Island 68801

Nebraska Association of Nuclear Physicians, Inc.

Merton A. Quaife, M.D., President
Dept. of Radiology, UNMC - 42nd & Dewey Ave., Omaha 68105

Nebraska Association of Pathologists

Joseph Rapoport, M.D., President
6901 No. 72nd St., Omaha 68122

Nebraska Chapter — American Academy of Family Physicians

David H. Filipi, M.D., Secretary-Treasurer
Mrs. Phyllis G. Hansen, Executive Secretary
River City Office Park, #202, 401 N. 117th, Omaha 68154

Nebraska Chapter — American Academy of Physician Assistants

John Ries, P.A.-C, President
1101 N. 50th, Omaha 68132

Nebraska Chapter — American Academy of Pediatrics

H. J. Kuehn, M.D., Chairman
8300 Dodge St., #219, Omaha 68114

Nebraska Chapter — American College of Emergency Physicians

Richard L. Keller, M.D., President
9641 No. 29th, Omaha 68112

Nebraska Chapter — American College of Physicians

Frederick F. Paustian, M.D., F.A.C.P., Governor
UNMC - 42nd & Dewey Ave., Omaha 68105

Nebraska Chapter — American College of Surgeons

Louis J. Gogela, M.D., Past President
2221 South 17th St., Lincoln 68502

Nebraska Chapter of Myasthenia Gravis Foundation

John F. Aita, M.D., Medical Advisor
105 So. 49th St., Omaha 68132

Nebraska Dental Association

Barry Roas, Executive Director
134 So. 13th St., Suite 1007, Lincoln 68508

Nebraska Dietetic Association

Linda O. Young, M.S., R.D., President
University of NE - 214 Ruth, Leventon Hall, Lincoln 68503

Nebraska Health Care Association

Sandra H. Hockley, Executive Director
3100 "O" St., Ste. 7, Lincoln 68510

Nebraska Hospital Association

Harlan Heald, President
Box 94833, 1335 "L" St., Lincoln 68509

Nebraska League for Nursing

Priscilla Allen, R.N., President
Box 126, Daykin 68338

Nebraska Medical Association

William L. Schellpeper, Executive Director
1512 First Tier Bank Bldg., Lincoln 68508

Nebraska Medical Foundation

William L. Schellpeper, Secretary
1512 First Tier Bank Bldg., Lincoln 68508

Nebraska Nurses Association

Mary Ann Sak, Executive Director
Suite 711, Terminal Bldg., Lincoln 68508

Nebraska Orthopaedic Society

Ronald Schwab, M.D., Secretary
2300 South 13th St., Lincoln 68502

Nebraska Perinatal Organization

Joy Jacobs, R.N., Secretary-Treasurer
St. Elizabeth Community Health Center - Labor & Del. Dpt.,
566 So. 70th St., Lincoln 68510

Nebraska Pharmacists Association

Tom R. Dolan, R.P., Executive Director
600 So. 12th, Lincoln 68508

Nebraska Psychiatric Society, District Branch of the

American Psychiatric Association
John Y. Donaldson, M.D., President
6901 No. 72nd St., Omaha 68122

Nebraska Public Health Association

President, N.P.H.A.
P.O. Box 94813, Lincoln 68509

Nebraska Radiological Society

Joseph C. Anderson, M.D., President
Dept. of Radiology, UNMC - 42nd & Dewey, Omaha 68105

Nebraska Rheumatism Association

Arthur L. Weaver, M.D., President
2121 South 56th St., Lincoln 68506

Nebraska Section, American College of

Obstetricians & Gynecologists
Larry E. Roffman, M.D.
800 Doctors Bldg., Omaha 68131

Nebraska Society of Anesthesiologists

K. Reed Peters, M.D., President
1512 First Tier Bank Bldg., Lincoln 68508

Nebraska Society of Internal Medicine

Vernon Garwood, M.D., President
120 Wedgewood Drive, Suite A, Lincoln 68510

Nebraska Society for Respiratory Therapy

Lynn Lamprecht, RRT, President
Mem. Hospital of Dodge Co., 450 E. 23rd St.

Nebraska State Department of Health

Gregg Wright, M.D., Director of Health
P.O. Box 95007, 301 Centennial Mall South, Lincoln 68509

Nebraska State Obstetric and Gynecology Society

Dennis D. Beavers, M.D., Secretary-Treasurer
720 No. 87th St., Omaha 68114

Nebraska Stroke Foundation

Karyl Newman, President
P.O. Box 67004, Lincoln 68506

Nebraska Urological Association

Charles F. Damico, M.D., F.A.C.S., President
2115 No. Kansas, Hastings 68901

Nebraska Veterinary Medical Association

Don Ellerbee, Executive Director
209 West 9th St., Hastings 68901

Omaha Mid-West Clinical Society

Ms. Lorraine E. Seibel, Executive Secretary
7363 Pacific St., #205-B, Omaha 68114

United Cerebral Palsy of Lancaster County, Inc.

Jane Hoffart, Client Services Rep.
P.O. Box 80103, Lincoln 68501

University of Nebraska Medical Center

Charles E. Andrews, M.D., Chancellor
42nd & Dewey Ave., Omaha 68105

AMA News Notes

(continued from page 17-A)

group vice president of the AMA's Scientific Affairs Group. The *Family Medical Guide* is not available through the AMA but can be purchased in local bookstores for \$29.95.

* * *

The AMA and the major national medical specialty societies have developed a position paper titled, "The Continuing Need for Legislative Reform of the Medical Liability System: A Response by the Medical Profession to Opponents of Tort Reform."

A product of the Coordination Project on Professional Liability, the position paper provides a response to opponents of tort reform, particularly the American Trial Lawyers Assn (ATLA). The 56-page paperbound booklet compares views by the medical profession with those of ATLA, with specific arguments by the medical profession followed by those of ATLA and then a rebuttal by the medical profession. Subjects covered include: the frequency and severity of medical liability claims, the affordability of medical liability insurance, effects of the liability crisis on medical care access and delivery, and proposed tort reforms by the medical profession.

The paper is designed for the use of anyone interested in professional liability. Copies can be obtained by calling Jane Coughlin at the AMA. (312) 645-4419.

* * *

A bill (HR 1445) to amend the Social Security Act to ensure physicians hearing and judicial review rights before exclusion from Medicare was introduced in the House of Representatives. The legislation is co-sponsored by Texas Reps. Ralph Hall (D), Charles Stenholm (D), and Beau Boulter (R). It was referred to the Committees on Ways and Means, and Energy and Commerce. Among provisions: exclusion from the program and public notification cannot occur before 30 days after the date of notice, and if the physician requests a hearing, not until the physician has been provided the opportunity to exhaust the administrative and judicial remedies available for review, including the right to seek district court review.

THE NAVAL RESERVE NEED YOU!

The Naval Reserve is actively seeking Physicians due to the expanded requirements of the military Fleet Hospital Program. All medical specialties are needed, particularly Surgeons and Anesthesiologists.

Alter your Practice routine by serving your country as a Naval Officer.

We offer:

- Flexibility in drill schedule
- 4 days' pay for 2 days' work
- Educational loan repayment program
- Continuing Medical Education (CME)
- The opportunity to travel and do something special
- Contact (913) 764-3664

ADVERTISER'S INDEX

	A	
Ayerst Laboratories	7, 8, 9, 10	
	B	
Bishop Clarkson Memorial Hospital	4	
	D	
Donley Medical Supply	6	
	F	
Family Practice Recertification	12	
	I	
Info-Builders, Inc.	12	
	K	
Knoll Pharmaceuticals	15, 16, 17	
	L	
Eli Lilly & Co.	14	
	M	
Mullikin Medical Centers	3	
	N	
Naval Reserve Readiness Command	19	
Norfolk Printing Co., Inc.	6	
	R	
Roche Laboratories	21, 22	
	U	
Unisys	11	
Upjohn Company	13	

Physicians' Classified

INTERNIST: With an interest in Gastroenterology needed to join a Cardiology/Internist in a rural Louisiana town from July, 1987. Attractive first year salary, benefits, and early partnership. If interested, send C.V. to: Manzoor H. Qazi, M.D., 1101A Port Arthur Terrace, Leesville, LA 71446.

RADIOLOGISTS NEEDED: Progressive 5 physician group is seeking two radiologists to join its expanding practice in Upper Midwest. One position will assist the group in providing services to a large hospital and large multi-specialty clinic practice. Experience in all modalities is essential. The second position will provide general radiography, mammography and ultrasound for several small rural hospitals. Both positions offer attractive compensation and benefits along with the opportunity to practice in high-quality medicine. Submit CV and cover letter explaining expectations to Box #027, **Nebraska Medical Journal**, 1512 First-Tier Bank Bldg., Lincoln, NE 68508.

FAMILY PRACTICE: North Platte, NE. Practice space available due to health problems. Excellent opportunity to associate with five board-certified physicians. Come to where the West begins! Call Gary L. Conell, M.D., 810 Reid, North Platte, NE 69101. Office 308-534-3222; Home 308-534-4109.

EXCELLENT OPPORTUNITIES FOR: Otorhinolaryngologist, Obstetrician/Gynecologist, Dermatologist, Psychiatrist, Endocrinologist, Radiologist, Orthopedist, and General/Family Practitioner. Excellent opportunity for physicians in Los Angeles suburb to join 80 member multispecialty medical group. Large fee-for-service and prepaid practice, no Medi-Cal. Excellent compensation program based on guarantee plus incentive, profit sharing and pension plan. Group provides health, dental, life and malpractice. Partnership in real estate and medical corporation available. See our Display Ad in this publication. Send CV to William Shaw, Associate Administrator, Mullikin Medical Center, 17821 S. Pioneer Blvd., Artesia, CA 90701.

FAMILY PRACTICE PHYSICIAN NEEDED: Established need for a family practice physician to join seven man group in beautiful Northwest Iowa. Modern 10,000 sq. ft. clinic building is next door to 72-bed JCAH accredited county hospital. Unusually progressive community of 10,000 has economy far above the state average. Storm Lake offers 3,000 acre lake, 85 acres of park and recreation, and is home to Buena Vista College. One hour from Sioux City, and two hours from Omaha & Des Moines. Generous guarantee with immediate incentive plan, paid malpractice insurance, liberal vacation and seminar time, limited call requirements with seven other physicians and no HMO's in the area. Contact Darrell Pritchard, Manager, Buena Vista Clinic, P.C., 620 Northwestern Drive, Storm Lake, IA 50588. Call collect 712-732-5030.

PHYSICIANS NEEDED: Family Practice and Internal Medicine physicians to join multipractice clinic in Watertown, S.D., a lake community of 17,000 located in eastern S.D. First year salary guarantee with paid malpractice and excellent

fringe benefits. Please reply with CV to: Joel Frey, Administrator, Bartron Clinic, P.C., 320 - 7th Ave., SE, Watertown, SD, 57201 or phone 605-886-8471.

WANTED: Internist wanted for progressive, affiliated VA Medical Center in Lincoln. Will be working primarily with acute care inpatients. Board certification preferred. Must meet English proficiency requirement. Licensure any state. Salary and bonus pay commensurate with training and experience. Equal Opportunity Employer. Write or call (402) 489-3802, Ext. 220, Chief, Medical Service, VA Medical Center, 600 South 70th, Lincoln, NE 68510.

EMERGENCY MEDICINE: In Omaha NE — Full and Part-time positions available in an emergency department for qualified physician seeking lucrative employment opportunities. Outstanding remuneration and comprehensive malpractice insurance provided. For further information contact: Deborah Bergun, Staffing Specialist, National Emergency Services, Inc., 255 Executive Dr., Suite 104, Plainview, NY 11803 or call 1-800-645-4848 or 516-349-0100.

FAMILY PRACTICE AND INTERNAL MEDICINE: Huron Clinic Foundation, Limited is a multispecialty group serving a trade area of approximately 50,000, has a practice situation where several members of the staff are near retirement and a ready practice would be available. A new member can start with NO CASH investment, first year salary guarantee, and receive a large number of benefits including malpractice insurance and a pension plan. The Clinic is located next to a 120 bed JCAH accredited regional hospital with excellent diagnostic and care capabilities. The Clinic is currently pressed for a Board Certified/Board Eligible physician to take over a practice. Call collect (605) 352-8691 or contact any staff member or the clinic manager at the Huron Clinic, P.O. Box 822, Huron, South Dakota 57350.

FAMILY PHYSICIAN/GERIATRIC SPECIALTY: The Creighton University Center for Healthy Aging seeks board certified family physician with interest and experience in geriatrics; an interest in health promotion and interdisciplinary activity; clinic, teaching and service responsibilities. Direct inquiries or vitae to: Michael Kasher, Associate Administrator, Department of Family Practice, Creighton University, 601 N. 30th St., Omaha, NE 68131, 402-280-4170.

WANTED: Neurology, Hem/Onc., Rad., Onc. 80 miles from K.C. 30 miles from 65,000 acre lake. Sedalia, MO. Rob Clemens, M.D. 816-826-8384, evenings.

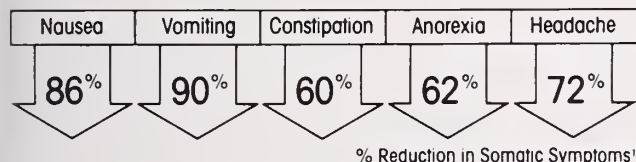
WANTED: Primary Care and Pulmonary. 80 miles from K.C. 30 miles from 65,000 acre lake. Sedalia, MO. Rob Clemens, M.D. 816-826-8384 evenings.

RURAL PRACTICE AVAILABLE: Three physicians left a four physician unopposed group practice in Valentine, NE this year. Need two F.P. graduates to join group. Cooperative community. Well-staffed and equipped clinic and hospital. Financial arrangements negotiable. Contact S. Senseney, M.D., or J. E. Farner, M.D., 111 E. 3rd St., Valentine, NE 69201. Telephone number (402) 376-3770.

See the difference in the first week¹

Significantly faster relief—62% of total four-week improvement evident in first week versus 44% with amitriptyline alone¹

Dramatic first-week reduction in somatic complaints²



Only 1/3 the dropout rate due to side effects of amitriptyline alone, although the incidence of side effects is similar¹

Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

Copyright © 1987 by Roche Products Inc. All rights reserved.



**Protect your decision.
Write "Do not substitute."**

Limbitrol[®]

Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) 

Limbitrol[®] DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) 

References: 1. Feighner JP, et al. *Psychopharmacology* 61: 217-225, Mar 22, 1979 2. Data on file, Hoffmann-La Roche Inc., Nutley, NJ

Limbitrol[®] 
Tranquiliizer—Antidepressant

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of moderate to severe depression associated with moderate to severe anxiety.
Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants. Do not use with monoamine oxidase (MAO) inhibitors or within 14 days following discontinuation of MAO inhibitors since hyperpyretic crises, severe convulsions and deaths have occurred with concomitant use; then initiate cautiously, gradually increasing dosage until optimal response is achieved. Contraindicated during acute recovery phase following myocardial infarction.

Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving).

Usage in Pregnancy: Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage, withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline; symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).

Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady state concentrations of the tricyclic drugs.

Concomitant use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.

Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring

reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.

The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs.

Cardiovascular: Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.

Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.

Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.

Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.

Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.

Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.

Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.

Endocrine: Testicular swelling and gynecostasia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion.

Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Overdose: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. IV administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single *h.s.* dose may suffice for some patients. Lower dosages are recommended for the elderly. Limbitrol DS (double strength) Tablets, initial dosage of three or four tablets daily in divided doses, increased up to six tablets or decreased to two tablets daily as required. Limbitrol Tablets, initial dosage of three or four tablets daily in divided doses, for patients who do not tolerate higher doses.

How Supplied: Double strength (DS) Tablets, white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and Tablets, blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt). Available in bottles of 100 and 500, Tel-E-Dose[®] packages of 100, Prescription Paks of 50.



ROCHE PRODUCTS INC.
Mundt, Puerto Rico 00701

THE REWARDS OF LIMBITROL

You're both smiling again!

In depressed and anxious patients, you can see the difference sooner—62% of total four-week improvement achieved in the first week with Limbitrol versus 44% with amitriptyline.¹

IN MODERATE DEPRESSION AND ANXIETY

Limbitrol®

Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)



Limbitrol DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt)



SEE THE DIFFERENCE IN THE FIRST WEEK¹



Please see references and summary of product information on adjacent page.

THE NEBRASKA MEDICAL JOURNAL



119
Years



Contents

Original Articles

Ruptured Abdominal Aortic Aneurysm: Seven Years Experience in a Community Hospital	185
<i>Deepak M. Gangahar, M.D., F.A.C.S.</i>	
<i>Stephen W. Carveth, M.D., F.A.C.S.</i>	
<i>Herbert E. Reese, M.D., F.A.C.S.</i>	
<i>Robert J. Buchman, M.D., F.A.C.S.</i>	
<i>Michael A. Breiner, M.D.</i>	

The Management of Hemorrhoids: Update 1987	190
<i>Alexander N. Kingsley, M.D., F.A.C.S.</i>	

Biography: Louis J. Gogela, M.D.	194
<i>Benjamin R. Gelber, M.D.</i>	

Fruits, Nuts and Centimeters	196
<i>Harry Perelman, M.D., F.A.C.S.</i>	

Fracture of the Month

Recurrent Wrist "Sprain" from Unrecognized Scaphoid Fracture	
<i>John F. Connolly, M.D.</i>	
<i>Samuel E. Smith, M.D.</i>	
<i>Thomas P. Ferlic, M.D.</i>	

Perinatal Page

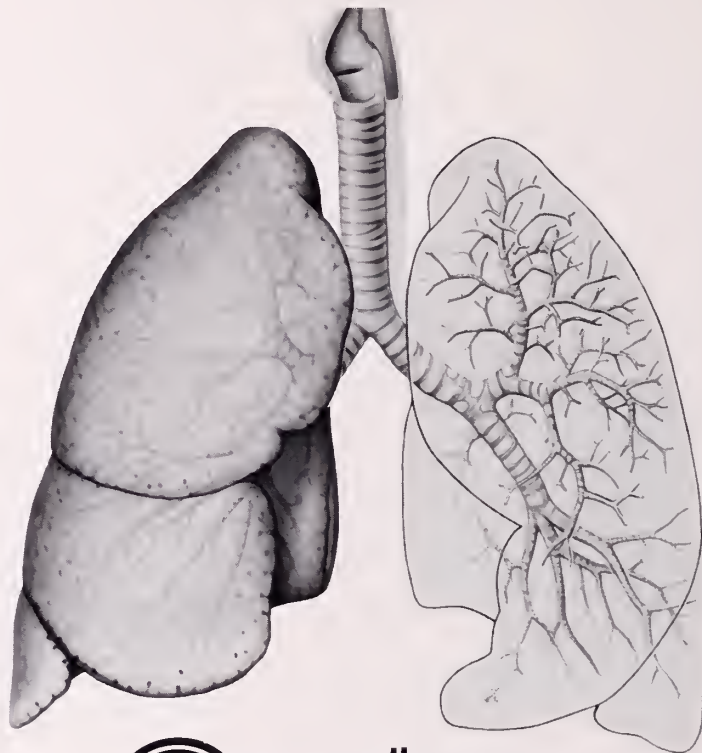
Obstetrical Ultrasound: The Role of Ultrasound in the Term and Post-Term Pregnancy	201
<i>J. Patrick Lavery, M.D.</i>	

Features

President's Page	203
Creighton University School of Medicine News	206
Coming Meetings	207
Picture Gallery	211

NEW YORK
2 EAST 103RD ST.
LIB-PERIODICALS DEPT.
THE N.Y. ACADEMY OF MED.

Consider the causative organisms...



Ceclor[®]
cefaclor

250-mg Pulvules[®] t.i.d.
offers effectiveness against
the major causes of bacterial bronchitis

Haemophilus influenzae, Streptococcus pneumoniae
(ampicillin-susceptible and ampicillin-resistant)

Note: Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

Ceclor[®] (cefaclor)

Summary. Consult the package literature for prescribing information.

Indications: Lower respiratory infections, including pneumonia, caused by susceptible strains of *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A β -hemolytic streptococci).

Contraindication:
Known allergy to cephalosporins.

Warnings:

CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients. Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:

- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)
Therapy-related adverse reactions are uncommon. Those reported include

- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] or the above skin manifestations accompanied by arthritis/arthritis and, frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness,

insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.

- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology

- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest[®] tablets but not with Tes-Tape[®] (glucose enzymatic test strip, Lilly).

(0728863)
PA 8794 AMP

©1987, ELI LILLY AND COMPANY



700241

Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46281.
Eli Lilly Industries, Inc.
Carolina, Puerto Rico 00630

Before prescribing, see complete prescribing information in SK&F CO. literature or PDR. The following is a brief summary.

WARNING

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K⁺ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K⁺ intake. Associated widened QRS complex or arrhythmia requires prompt additional therapy. Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.

Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium; use with caution with 'Dyazide'. Do periodic serum electrolyte determinations particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin (ACTH). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, granulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevated BUN or creatinine in both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is common with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function. Thiazides may add to or potentiate the action of other antihypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, arthralgias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, iridocyclitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.

Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 100 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak™ unit-of-use bottles of 100.

RS-DZ:L42

In Hypertension*... When You Need to Conserve K⁺

Remember the Unique Red and White Capsule: Your Assurance of SK&F Quality

Serum K⁺ and BUN should be checked periodically (see Warnings and Precautions).



Potassium-Sparing
DYAZIDE®
25 mg Hydrochlorothiazide/50 mg Triamterene/SKF
Over 20 Years of Confidence

The unique
red and white
Dyazide® capsule:
Your assurance of
SK&F quality.



a product of
SK&F CO.
Carolina, P.R. 00630

Motrin[®] 800mg

TABLETS
ibuprofen



Extra strength
Convenience
Economy

Upjohn



A Century
of Caring
1886-1986

The Nebraska Medical Journal

VOL. 72, NO. 6

JUNE 1987

EDITOR —

ALAN D. FORKER, M.D.
5505 Ellendale Road,
Lincoln, NE 68510

Associate Editors:

Deepak M. Gangahar, M.D., Lincoln
Charles S. Wilson, M.D., Lincoln

Editorial Board:

James O. Armitage, M.D., Omaha
Rodney S.W. Basler, M.D., Lincoln
Jehangir B. Bastani, M.D., Lincoln
John H. Casey, M.D., Lincoln
Paul E. Collicott, M.D., Lincoln
John F. Connolly, M.D., Omaha
Douglass Decker, Jr., M.D., Lincoln
Robert W. Gillespie, M.D., Lincoln
Stephen R. Grenier, M.D., Lincoln
Bruce D. Gutnik, M.D., Omaha
Roger Harned, M.D., Omaha
Edward A. Holyoke, Jr., M.D., Ogallala
Sushil S. Lacy, M.D., Lincoln
Hal K. Mardis, M.D., Omaha
Gilles R. G. Monif, M.D., Omaha
Walter J. O'Donohue, M.D., Omaha
William F. Rayburn, M.D., Omaha
John L. Reed, M.D., Lincoln
Jerald R. Schenken, M.D., Omaha
Kenton L. Shaffer, M.D., Kearney
Harlan C. Shriner, Jr., M.D., Lincoln
Patricia Cole Stivins, M.D., Lincoln
Harold W. Thaut, M.D., Beatrice
Jon S. Thompson, M.D., Omaha
William L. Vosik, M.D., Kearney
Arthur Weaver, M.D., Lincoln



SUBSCRIPTION RATE

\$18.00 Per Year U.S.
\$18.00 Per Year Foreign Country
Single Copies \$1.50 Each

Copyright © 1987 Nebraska Medical Association. Information concerning reprints of the articles in this Journal and concerning obtaining permission for the reproduction of any portion of this Journal may be obtained from the Editor.

The Nebraska Medical Journal does not assume responsibility for statements made or opinions expressed by the authors. Products and services advertised are neither endorsed nor warranted by the Nebraska Medical Association. The Nebraska Medical Journal reserves the right to accept or reject advertising copy.

Published monthly and Second-Class Postage paid at Lincoln, Nebraska and at additional mailing offices (ISSN 0091-6730)

Address all correspondence relating to subscriptions, advertising or address changes to William L. Schellpeper, Business Manager, 1512 First Tier Bank Building, Lincoln, Nebraska 68508. Phone (402) 474-4472.

ORIGINAL ARTICLES —

Ruptured Abdominal Aortic Aneurysm:

Seven Years Experience in a Community Hospital 185

Deepak M. Gangahar, M.D., F.A.C.S.

Stephen W. Carveth, M.D., F.A.C.S.

Herbert E. Reese, M.D., F.A.C.S.

Robert J. Buchman, M.D., F.A.C.S.

Michael A. Breiner, M.D.

The Management of Hemorrhoids: Update 1987 190

Alexander N. Kingsley, M.D., F.A.C.S.

Biography: Louis J. Gogela, M.D. 194

Benjamin R. Gelber, M.D.

Fruits, Nuts and Centimeters. 196

Harry Perelman, M.D., F.A.C.S.

FRACTURE OF THE MONTH —

Recurrent Wrist "Sprain" from an

Unrecognized Scaphoid Fracture. 198

John F. Connolly, M.D.

Samuel E. Smith, M.D.

Thomas P. Ferlic, M.D.

PERINATAL PAGE —

Obstetrical Ultrasound: The Role of Ultrasound

in the Term and Post-Term Pregnancy 201

J. Patrick Lavery, M.D.

FEATURES —

President's Page 203

Creighton University School of Medicine News 206

Coming Meetings. 207

Picture Gallery 211

Since 1925

Nebraska's Leading Physicians and Surgical Supply House

Phone 474-3222



**DONLEY MEDICAL
SUPPLY COMPANY**

P.O. Box 83108, Lincoln, NE 68501
AUTHORIZED CONTRACT AGENT

REPRINTS

OF YOUR

Technical Articles

Are a direct presentation of research
and a valuable supplement
to any doctor's library.



It costs very little
to run reprints —
write us for prices

Norfolk Printing Co., Inc.

118 North Fifth
NORFOLK, NEBRASKA 68701

Letterheads - Statements
Envelopes - Office Forms
Quality Printing at the Right Price

ADVICE TO AUTHORS

Manuscripts should be submitted in duplicate to the Editor at the following address: Alan D. Forker, M.D., 5505 Ellendale Road, Lincoln, Nebraska 68510. The manuscript should be typewritten, double-spaced, on 8½ x 11 in. paper, with generous margins on each page. Number all pages in the right upper corner with the author's surname.

Review articles will be considered, and should generally be limited to less than 4,000 words and approximately 30 references.

Manuscripts describing original clinical or laboratory research should be limited to 2,000 words and approximately 20 references.

Acknowledgements must be given when material from other publications is included. Provide names of authors, title of article, title of journal or book, volume number, pages, month and year, and publisher's permission to reprint.

Always send a covering letter or letter of transmittal with each manuscript, and refer to the manuscript by its title, in the letter and all correspondence. Do not send a manuscript that was published elsewhere.

Title page: each manuscript should have a title page, including the full name, academic degree, and hospital or university affiliation of each author. A name and address for reprint requests should be included on the title page, including street address, city, state, and zip code.

Summary for article: all major scientific articles should be accompanied by a summary at the end of the article, summarizing the key information and recommendations presented.

References: should be listed in the order in which they appear in the article and should be typed double-spaced. Authors are responsible for the completeness and accuracy of all cited references. Journal references should include authors' names and initials, title of article, abbreviated name of Journal (as listed in Index Medicus), volume number, inclusive pages, and year of publication. References to books should include authors, title, location and name of publisher, year of publication, edition, and page numbers.

Tables and illustrations: should be typed double-spaced on separate sheets of 8½ x 11 in. paper. Each Table should have a title. Illustrations should be prepared professionally and submitted as high-quality, glossy, unmounted black-and-white photographic prints, at least 5 x 7 in. Do not send original artwork. Each illustration should be consecutively numbered and cited in the text. Each photograph should have a gummed label on the back containing the figure number, name of senior author and an arrow indicating top of figure. Legends should be typed double-space for each illustration. Permission to reproduce a picture of a patient is needed, if such a picture is included.

Letters-to-the-Editor: letters are encouraged by all readers and will be published as space permits and at the discretion of the Editor. All letters should be accompanied by the notation: For publication. Galley proofs generally will not be returned to the authors pre-publication.

Manuscripts will be published in the order in which they are received, particularly in the order in which galley proofs are returned from the authors. The Editor of this Journal assumes no responsibility for opinions and claims expressed in an article published in this Journal.

Reprints should be ordered from the printer, Norfolk Printing Company, Inc., P.O. Box 278, Norfolk, Nebraska 68701.

CONFIRMED

CONFIRMED BY CLINICAL EVIDENCE

ZANTAC® 150 h.s.

ranitidine HCl/Glaxo 150 mg tablets

EFFECTIVE MAINTENANCE THERAPY

for healed duodenal ulcer patients

See last page for references and
Brief Summary of Product Information.

Glaxo /  **ROCHE**

CONFIRMED

In two randomized, double-blind, and well-controlled clinical trials, ZANTAC 150 mg h.s. significantly superior to cimetidine 400 mg h.s. for maintenance therapy in healed duodenal ulcers.

Percent of patients with observed duodenal ulcer recurrence

		0-4 months	0-8 months	0-12 months	No. patients
USA ¹	ranitidine 150 mg h.s.	9%	14%*	16%†	60
	cimetidine 400 mg h.s.	23%	34%	43%	66
UK, Ireland, Australia ²	ranitidine 150 mg h.s.	8%‡	14%‡	23%‡	243
	cimetidine 400 mg h.s.	21%	34%	37%	241

*p=0.02

†p=0.01

‡p≤0.004

%=life-table estimates

All patients were permitted prn antacids for relief of pain.

These two trials used the currently recommended dosing regimen of cimetidine (400 mg h.s.) and ranitidine (150 mg h.s.). A comparison of other dosing regimens has not been studied.

The studied dosing regimens are not equivalent with respect to the degree and duration of acid suppression or suppression of nocturnal acid.

The superiority of ranitidine over cimetidine in these trials indicates that the dosing regimen currently recommended for cimetidine is less likely to be as successful in maintenance therapy.

Convenient once-a-night dose with a

low incidence of side effects³

Headache, sometimes severe, seems to be related to ranitidine administration. Other side effects have been reported; for a complete listing, see the ADVERSE REACTIONS section in the Brief Summary.

No significant interference with the hepatic cytochrome

P-450 enzyme system at recommended doses

ZANTAC 150 mg has no significant drug interactions with theophylline, phenytoin, or warfarin. The bioavailability of certain medications whose absorption is dependent on a low gastric pH may be altered when ZANTAC or other medications that decrease gastric acidity are administered.

Zantac[®] 150
ranitidine HCl/Glaxo 150 mg tablets

One tablet at bedtime
for maintenance

See next page for references and
Brief Summary of Product Information.

Glaxo /  **ROCHE**

CONFIRMED

Zantac[®] 150

ranitidine HCl/Glaxo 150 mg tablets

*One tablet at bedtime for maintenance therapy
in healed duodenal ulcer patients*

References:

1. Silvis SE, Griffin J, Hardin R, et al: Final report on the United States multicenter trial comparing ranitidine to cimetidine as maintenance therapy following healing of duodenal ulcer. *J Clin Gastroenterol* 1985;7(6):482-487.
2. Gough KR, Korman MG, Bardhan KD, et al: Ranitidine and cimetidine in prevention of duodenal ulcer relapse: A double-blind, randomised, multicentre, comparative trial. *Lancet* 1984;ii:659-662.
3. Data available on request, Glaxo Inc.

ZANTAC[®] 150 Tablets
(ranitidine hydrochloride)
ZANTAC[®] 300 Tablets
(ranitidine hydrochloride)

BRIEF SUMMARY OF PRODUCT INFORMATION

The following is a brief summary only. Before prescribing, see complete prescribing information in ZANTAC[®] product labeling.

INDICATIONS AND USAGE: ZANTAC[®] is indicated in:

1. Short-term treatment of **active duodenal ulcer**. Most patients heal within four weeks.
2. **Maintenance therapy** for duodenal ulcer patients at reduced dosage after healing of acute ulcers.
3. The treatment of **pathological hypersecretory conditions** (eg, Zollinger-Ellison syndrome and systemic mastocytosis).
4. Short-term treatment of **active, benign gastric ulcer**. Most patients heal within six weeks and the usefulness of further treatment has not been demonstrated.
5. Treatment of **gastroesophageal reflux disease (GERD)**. Symptomatic relief commonly occurs within one or two weeks after starting therapy and is maintained throughout a six-week course of therapy.

In active duodenal ulcer, active, benign gastric ulcer; hypersecretory states; and GERD, concomitant antacids should be given as needed for relief of pain.

CONTRAINDICATIONS: ZANTAC[®] is contraindicated for patients known to have hypersensitivity to the drug.

PRECAUTIONS: Symptomatic response to ZANTAC[®] therapy does not preclude the presence of gastric malignancy.

Since ZANTAC is excreted primarily by the kidney, dosage should be adjusted in patients with impaired renal function (see **DOSE AND ADMINISTRATION**). Caution should be observed in patients with hepatic dysfunction since ZANTAC is metabolized in the liver.

False-positive tests for urine protein with Multistix[®] may occur during ZANTAC therapy, and therefore testing with sulfosalicylic acid is recommended.

Although recommended doses of ZANTAC do not inhibit the action of cytochrome P-450 enzymes in the liver, there have been isolated reports of drug interactions which suggest that ZANTAC may affect the bioavailability of certain drugs by some mechanism as yet unidentified (eg, a pH-dependent effect on absorption or a change in volume of distribution).

Lack of experience to date precludes recommending ZANTAC for use in children or pregnant patients. Since ZANTAC is secreted in human milk, caution should be exercised when administered to a nursing mother.

ADVERSE REACTIONS: Headache, sometimes severe, seems to be related to ZANTAC[®] administration. Constipation, diarrhea, nausea/vomiting, and abdominal discomfort/pain have been reported. There have been rare reports of malaise, dizziness, somnolence, insomnia, vertigo, tachycardia, bradycardia, premature ventricular beats, and arthralgias. Rare cases of reversible mental confusion, agitation, depression, and hallucinations have been reported, predominantly in severely ill elderly patients.

In normal volunteers, SGPT values were increased to at least

twice the pretreatment levels in 6 of 12 subjects receiving 100 mg qid IV for seven days, and in 4 of 24 subjects receiving 50 mg qid for five days. With oral administration there have been occasional reports of reversible hepatitis, hepatocellular or hepatocanalicular or mixed, with or without jaundice.

There have been rare reports of reversible leukopenia, granulocytopenia, thrombocytopenia, and pancytopenia.

Although controlled studies have shown no antiandrogenic activity, occasional cases of gynecomastia, impotence, and loss of libido have been reported in male patients receiving ZANTAC, but the incidence did not differ from that in the general population.

Incidents of rash, including rare cases suggestive of mild erythema multiforme, and, rarely, alopecia, have been reported, as well as rare cases of hypersensitivity reactions (eg, bronchospasm, fever, rash, eosinophilia) and small increases in serum creatinine.

OVERDOSAGE: Information concerning possible overdose and its treatment appears in the full prescribing information.

DOSE AND ADMINISTRATION Active Duodenal Ulcer: The current recommended adult oral dosage is 150 mg twice daily. An alternate dosage of 300 mg once daily at bedtime can be used for patients in whom dosing convenience is important. The advantages of one treatment regimen compared to the other in a particular patient population have yet to be demonstrated.

Maintenance Therapy: The current recommended adult oral dosage is 150 mg at bedtime.

Pathological Hypersecretory Conditions (such as Zollinger-Ellison Syndrome): The current recommended adult oral dosage is 150 mg twice a day. In some patients it may be necessary to administer ZANTAC 150-mg doses more frequently. Doses should be adjusted to individual patient needs, and should continue as long as clinically indicated. Doses up to 6 g/day have been employed in patients with severe disease.

Benign Gastric Ulcer: The current recommended adult oral dosage is 150 mg twice a day.

GERD: The current recommended adult oral dosage is 150 mg twice a day.

Dosage Adjustment for Patients with Impaired Renal Function: On the basis of experience with a group of subjects with severely impaired renal function treated with ZANTAC, the recommended dosage in patients with a creatinine clearance less than 50 ml/min is 150 mg every 24 hours. Should the patient's condition require, the frequency of dosing may be increased to every 12 hours or even further with caution. Hemodialysis reduces the level of circulating ranitidine. Ideally, the dosage schedule should be adjusted so that the timing of a scheduled dose coincides with the end of hemodialysis.

HOW SUPPLIED: ZANTAC[®] 300 Tablets (ranitidine hydrochloride equivalent to 300 mg of ranitidine) are yellow, capsule-shaped tablets embossed with "ZANTAC 300" on one side and "Glaxo" on the other. They are available in bottles of 30 (NDC 0173-0393-40) and unit dose packs of 100 tablets (NDC 0173-0393-47).

ZANTAC[®] 150 Tablets (ranitidine hydrochloride equivalent to 150 mg of ranitidine) are white tablets embossed with "ZANTAC 150" on one side and "Glaxo" on the other. They are available in bottles of 60 tablets (NDC 0173-0344-42) and unit dose packs of 100 tablets (NDC 0173-0344-47).

Store between 15° and 30°C (59° and 86°F) in a dry place. Protect from light. Replace cap securely after each opening.

© Copyright 1983, Glaxo Inc. All rights reserved. October 1986

Glaxo

Glaxo Inc.
Research Triangle Park, NC 27709

READY FOR AN OFFICE COMPUTER?

AUTO-MED INC. presents MEDICAL OFFICE SYSTEMS software ready to run on your IBM-XT, IBM-AT, or Compatible.

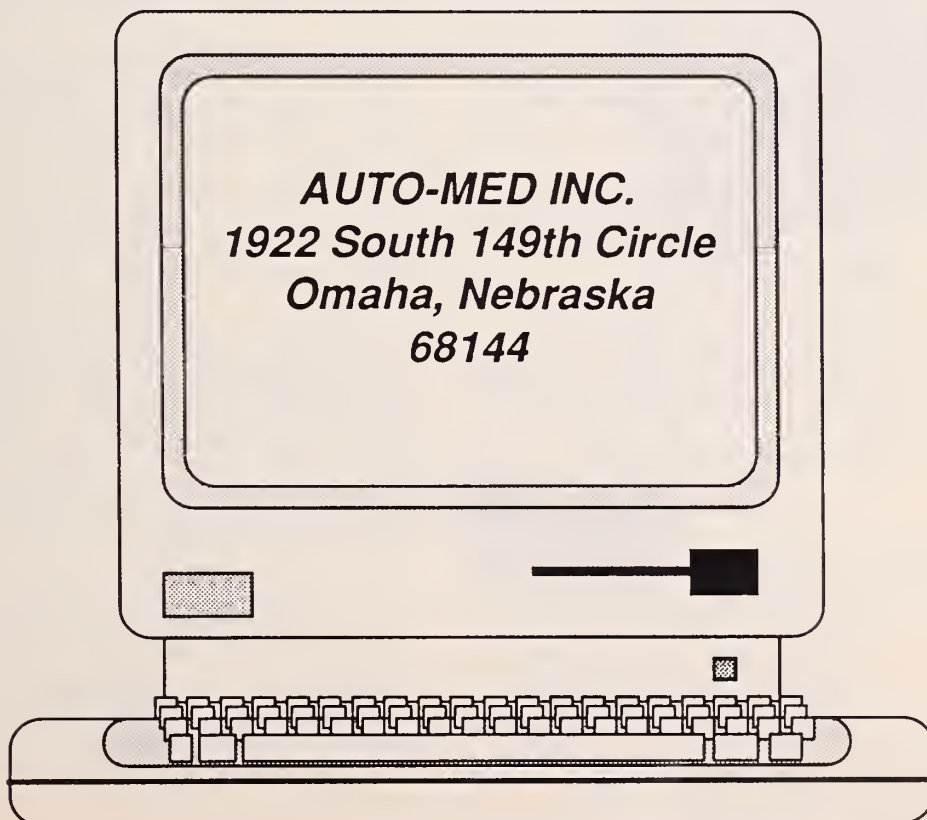
The MEDICAL OFFICE SYSTEM can be leased and supported for a low monthly fee with no "up-front" charges!

The MEDICAL OFFICE SYSTEM was developed by and for PHYSICIANS and includes the following features:

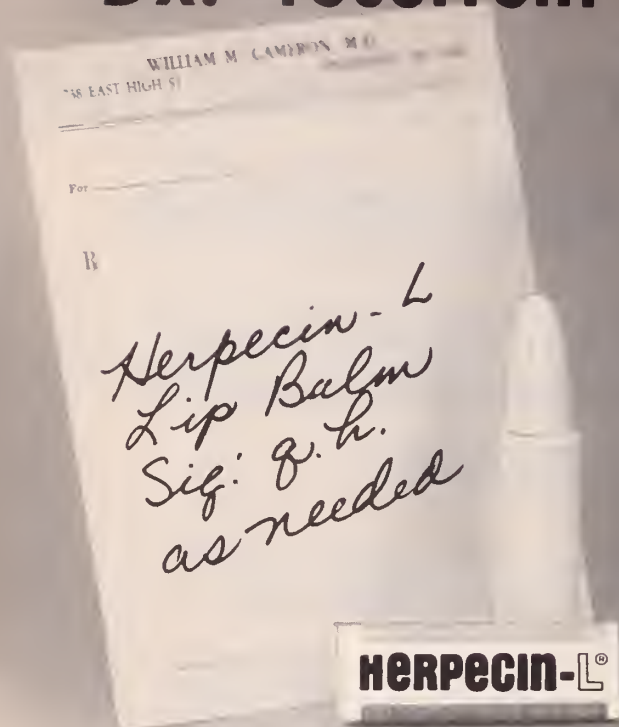
- * records patient demographic data * prints monthly statements * prints insurance forms
- * posts all charges in CPT code * records diagnosis in ICD-9 code * allows 20 fee schedules
- * detailed practice analysis * collection rate & accounts receivable analysis * audit trail
- * print patient face sheets * print charge tickets * print patient recalls
- * record non-patient practice income * medical data search * print day sheets * print mail labels

The MEDICAL OFFICE SYSTEM is available as a Complete System or Software alone - lease or purchase.

For Further information, demonstration disks, or documentation manuals contact:



Dx: recurrent herpes labialis



"HERPECIN-L is my **treatment of choice** for perioral herpes." GP, NY

"HERPECIN-L appears to actually **prevent** the blisters . . . used **soon enough**." DDS, MN

"HERPECIN-L® . . . a **conservative approach** with **low risk/high benefits**." MD, FL

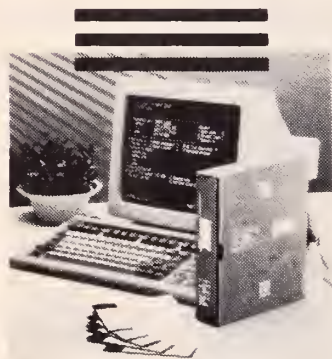
"Used at **prodromal symptoms** . . . blisters **never formed** . . . remarkable." DH, MA

"(In clinical trials) . . . **response was dramatic**. **HERPECIN-L** . . . proven **far superior**." DDS, PA

"All patients claimed **shorter duration** . . . at **prodromal symptoms** . . . **HERPECIN-L averted** the attacks." MD, AK

OTC. See P.D.R. for information. For samples to make your own clinical evaluation, write: **CAMPBELL LABORATORIES, INC.**, P.O. BOX 812-MD, FDR STATION, NEW YORK, N.Y. 10150

In Nebraska HERPECIN-L is available at all *Keystone, Osco and Walgreens* and other select pharmacies.



Physicians who have thoroughly investigated their choices are selecting MDX* medical data software.

*MDX is a trademark of Calyx, Inc.

MDX

Call us about the multi-user, multi-tasking MDX system. We will send you a video tape presentation.



INFO-BUILDERS, INC.

402/331-2546
11203 JOHN GALT BOULEVARD
OMAHA, NEBRASKA 68137

Providing complete installation, training and support services.

AMA News Notes

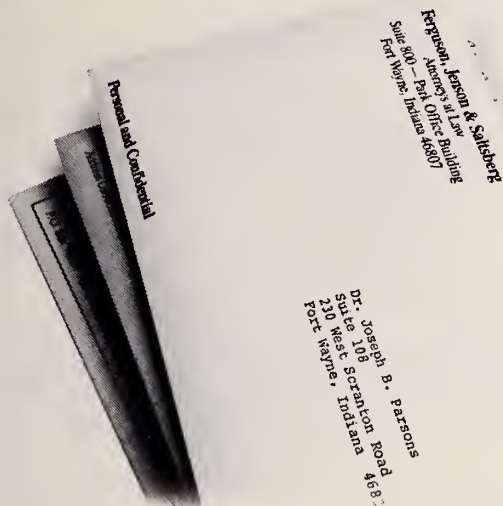
The AMA Board of Trustees is recommending no dues increase for 1988. At its April meeting, the board reviewed the financial projections for 1987 and 1988, as well as a projection for 1989, and decided that current dues levels could remain in effect. Regular membership dues are \$375 a year.

In making its recommendations, the board pointed out that new programs currently under consideration by the House of Delegates could adversely affect the financial projections. In addition, the board said that only modest growth in AMA activities was likely given no dues increase and any new projects would be possible only "if existing activities of lower priority are eliminated."

The trustees noted that "incremental dues increases will be likely in 1989 to support the continued growth of the Association." To gain more resources, the board encouraged "vigorous and innovative membership recruitment."

* * *

Crisis in black and white.



Your personal crisis may be waiting in the morning mail. If so, you'll want the best professional help. You'll want a Medical Protective General Agent.

Professional liability coverage is our only business. And we've been providing it for almost 100 years. Our agents live in the territories they serve so they understand the local legal climate. And with the extensive resources of the home office Law Department to draw from, they're always ready to answer your questions or give advice.

Someday it may be you against a negligence charge. When that day comes and your professional reputation is on the line, you're going to want all the help you can get. To make sure you have it, contact your Medical Protective General Agent today.

THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

L. Roger Garner
Suite 114, Corporate Plaza, 11212 Davenport, Omaha, NE 68154, (402) 334-9689

ORGANIZATIONS, NATIONAL

American Academy of Family Physicians
1740 West 92nd St., Kansas City, MO 64114

American Academy of Pediatrics
James E. Strain, M.D., Executive Director
141 Northwest Point Road, P.O. Box 927
Elk Grove Village, IL 60007

American Academy of Physician Assistants
F. Lynn May, Executive Vice President
1117 N. 19th St., 3rd Floor
Arlington, VA 22209

American Academy of Ophthalmology
Thomas P. Kearns, M.D., President
655 Beach Street, P.O. Box 7424
San Francisco, CA 94120-7424

American College of Emergency Physicians
Colin C. Rorrie, Jr., Ph.D., Exec. Director
Box 619911, Dallas, TX 75261-9911

American College of Legal Medicine
Miss Betty Hanna, Executive Secretary
213 W. Institute Place, Ste. 412, Chicago, IL 60610

American College of Obstetricians & Gynecologists
Warren H. Pearse, M.D., Executive Director
600 Maryland Avenue SW, Ste. 300 E
Washington, D.C. 20024

American College of Physicians
John R. Ball, M.D., F.A.C.P., Exec. Vice President
4200 Pine St., Philadelphia, PA 19104

American College of Radiology
John J. Curry, Executive Director
1891 Preston White Drive, Reston, VA 22091

American College of Surgeons
C. Rollins Hanlon, M.D., Director
55 East Erie St., Chicago, IL 60611

American Diabetes Association, Inc.
Robert S. Bolan, Exec. Vice President
1660 Duke Street, Alexandria, VA 22314

American Heart Association National Center
Mr. Dudley Hafner, Exec. Vice President
7320 Greenville Avenue, Dallas, TX 75231

American Hospital Association
Carol M. McCarthy, Ph.D., J.D., President
840 North Lake Shore Dr., Chicago, IL 60611

American Medical Association
James H. Sammons, M.D., Exec. Vice President
535 North Dearborn St., Chicago, IL 60610

American Society of Anesthesiologists
Mr. J. W. Andes, Executive Secretary
515 Busse Hwy., Park Ridge, IL 60068

American Society of Clinical Pathologists
Robert A. Dietrich, M.D., Chief Executive
2100 W. Harrison St., Chicago, IL 60612

American Society of Internal Medicine
Joseph F. Boyle, M.D., Exec. Vice President
1101 Vermont N.W., Ste. 500, Washington, D.C. 20005

American Urological Association, Inc.
Mr. Richard J. Hannigan, Executive Secretary
1120 No. Charles St., Baltimore, MD 21201

Arthritis Foundation
Clifford M. Clarke, C.A.E., President
1314 Spring St., N.W., Atlanta, GA 30309

International College of Surgeons
F. C. Ottati, M.D., Int. Sec. General
1516 North Lake Shore Dr., Chicago, IL 60610

National Rehabilitation Association
633 S. Washington St. Alexandria, VA 22314

Radiological Society of North America
James J. McCort, M.D., President
1415 W. 22nd St., Oak Brook, IL 60521

South Central Section of the American Urological Association, Inc.
Henry Kammandel, M.D., Past President
8300 Dodge St., Ste. 407, Omaha, NE 68114

The complete journal for family practice physicians

- Reaches 79,000 family physicians monthly
- Presents the most commonly seen patient problems in family practice
- Written by physicians for physicians
- The most current clinical updates in:

Cardiology	Ob/Gyn
Diabetes	Psychiatry
Pediatrics	Gastroenterology
- Provides 20 hours of CME Category 1 Credit

PRACTICAL • CLINICAL • EDUCATIONAL • CURRENT

MARCH 1987 / VOL. 9, NO. 3

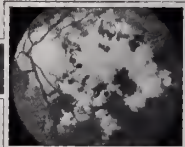
Family Practice Recertification

● C1: 10 Genitourinary system
Prostatitis: Diagnosis and Treatment
William R. Scheibel, MD

● C1: 20 Problems other than specific diagnostic/symptomatic
Automobile Safety
N. Burton Atsod, MD • Richard J. Smith, III • Michael A. Friedman

▲ C1: 1 Communicable diseases
Acquired Immunodeficiency Syndrome, Part 2: The Spectrum of Disease
Navin M. Amin, MD

◆ C1: 7 Circulatory system
Antianginal Drug Therapy for Stable Angina Pectoris: Update
Wilbert S. Aronow, MD



page 81

EXTENSIVE CHORIORETINITIS CAUSED BY TOXOPLASMOSIS ASSOCIATED WITH AIDS INFECTION

Creighton University Medical Center
announces a REVIEW COURSE in

WHAT YOU NEED TO KNOW ABOUT PERINATAL ULTRASOUND

At The Red Lion Inn
Omaha, Nebraska
June 12 - 13, 1987

COURSE DIRECTOR: Washington C. Hill, M.D.
Director, Maternal-Fetal Medicine
and The Perinatal Center

FACULTY:

Joseph C. Anderson, M.D.
Kevin J. Case, M.D.
Frank A. Chervenak, M.D.
Cheri Fisher, R.T., R.D.M.S.
Thomas S. Forrest, M.D.
Peter A. T. Grannum, M.D.
Linda S. Head, M.D.
Washington C. Hill, M.D.
Michael G. Levine, M.D.

David A. Martinez, M.D.
William F. Rayburn, M.D.
Anthony M. Vintzileos, M.D.



AMA CATEGORY I
CREDITS AND ACOG
COGNATES AVAILABLE

For further information:
Office of Continuing
Education
Creighton University
School of Medicine
Omaha, NE 68178
Call: 1-800-228-7212
ex. 2550

AMA News Notes

James H. Sammons, M.D., AMA executive vice president, was interviewed recently by the CBS Evening News on the issue of physician dispensing of drugs. Others interviewed on the program, included representatives from FTC and drug wholesale companies. While it is not unethical for physicians to dispense drugs, the AMA does not think it advisable except under certain special conditions, Dr. Sammons said. "We think doctors should prescribe and pharmacists should dispense," he said.

* * *

The AMA's Division of Legislative Activities has a new director of its Dept. of Federal Legislation. Division Director Harry N. Peterson announced the promotion of Bruce D. Blehart to head the department, effective April 1. Blehart, 34, has been assistant director for the past five years in the department, which is responsible for reviewing proposed federal legislation and regulations affecting medical

(continued on page 210)

AUTOMATED MEDICAL OFFICE SYSTEMS

UNISYS

The Power of ²

Announcing the merger of two great computer companies, BURROUGHS and SPERRY. **UNISYS** is derived from three words – UNITED, INFORMATION, SYSTEMS.

UNISYS now has over 60,000 installations in virtually every line of business. **UNISYS** offers a combined heritage in solving business problems totaling nearly 200 years.

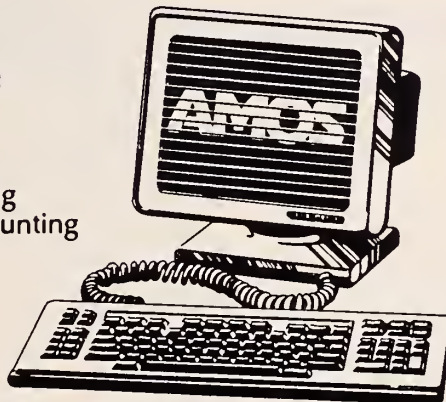
We have dedicated ourselves at **UNISYS** to retaining the position we now hold as the number one computer company in the area of customer satisfaction.¹

¹ Data Pro 1985, 1986

PLUS + + MEDICAL COMPUTER MANAGEMENT

Major Components include:

- Patient Registration
- Patient Accounting
- Accounts Receivable
- Appointment Scheduling
- Collection Agency Accounting
- Medical Records
- Report Generator



Customer Services Include:

- Education and Training
- Installation Support
- Consulting Services
- Strategic Planning
- Marketing Consultation
- User Meetings
- Software Enhancements

For more information please clip and send this request form to

UNISYS CORPORATION

or call (402) 330-5395

10810 Farnam Drive

Attention; Beverly Schott

Omaha, NE 68154

Clinic Name _____

Contact Name _____

Address _____

City, State, Zip _____

Phone _____

AIM HIGH

A SPECIAL PRACTICE FOR SPECIALISTS.



If you're a **Surgeon or OB/GYN or Other Medical Specialist**, the Air Force may have a special practice for you. What makes it special? You'll enjoy an excellent pay and benefits package. There'll be more time to spend with your family. You'll receive 30 days of vacation with pay each year. And you will work with modern equipment and some of the most highly trained professionals in the world, serving your country and your patients. Now that's special! Find out just how special your practice can be. Call

TSgt James H. Sisley
(402) 556-0715



COUNCILOR DISTRICTS AND COUNTIES

First District: Councilor: Richard B. Svehla, Omaha. Counties: Douglas, Sarpy.
Second District: Councilor: Sushil S. Lacy, Lincoln. Counties: Cass, Lancaster, Otoe.
Third District: Councilor: C. T. Frerichs, Beatrice. Counties: Gage, Johnson, Nemaha, Pawnee, Richardson.
Fourth District: Councilor: Roger Massie, Plainview. Counties: Antelope, Cedar, Cuming, Dakota, Dixon, Knox, Madison, Pierce, Stanton, Thurston, Wayne.
Fifth District: Councilor: William Chleborad, M.D., Fremont. Counties: Boone, Burt, Colfax, Dodge, Merrick, Nance, Platte, Washington.
Sixth District: Councilor: Robert Herpolsheimer, M.D., Seward. Counties: Butler, Hamilton, Polk, Saunders, Seward, York.
Seventh District: Councilor: Robert Quick, M.D., Crete. Counties: Clay, Fillmore, Jefferson, Nuckolls, Saline, Thayer.
Eighth District: Councilor: Floyd H. Shiftermiller, Ainsworth. Counties: Boyd, Brown, Cherry, Holt, Keya Paha, Rock, Sheridan.
Ninth District: Councilor: Stanley Nabity, Grand Island. Counties: Blaine, Buffalo, Custer, Dawson, Garfield, Grant, Greeley, Hall, Hooker, Howard, Loup, Sherman, Thomas, Valley, Wheeler.
Tenth District: Councilor: David R. Little, M.D., Hastings. Counties: Adams, Chase, Dundy, Franklin, Frontier, Furnas, Gosper, Harlan, Hayes, Hitchcock, Kearney, Phelps, Red Willow, Webster.
Eleventh District: Councilor: Donald E. Fischer, North Platte. Counties: Arthur, Deuel, Garden, Keith, Lincoln, Logan, McPherson, Perkins.
Twelfth District: Councilor: Donald E. Wilkinson, Alliance. Counties: Banner, Box Butte, Cheyenne, Dawes, Kimball, Morrill, Scotts Bluff, Sioux.

NEBRASKA MEDICAL ASSOCIATION Councilor Districts and Component County Medical Societies COMPONENT COUNTY MEDICAL SOCIETIES

COUNTY	PRESIDENT	SECRETARY-TREASURER
Adams	Kevin Wycoff, Hastings	Richard French, Hastings
Antelope-Pierce	Kenneth Peters, Plainview	David Johnson, Osmond
Box Butte	Wendell Fairbanks, Alliance	Chris Wilkinson, Alliance
Buffalo	John Schulte, Kearney	Gerry Jensen, Kearney
Butler	Victor Thoendel, David City	Jack Kaufmann, David City
Cass	R. R. Anderson, Nehawka	Glen K. Knosp, Elmwood
Cheyenne-Kimball-Deuel	James Thayer, Sidney	Clinton Dorwart, Sidney
Cuming		Gordon Moshman, West Point
Custer	Loren Jacobsen, Broken Bow	N. Leon Books, Broken Bow
Dawson		Rodney Sitorius, Cozad
Dodge	Rod Koerber, Fremont	W. B. Eaton, Fremont
Five	Willis L. Wiseman, Wayne	Robert Benthack, Wayne
Four	Tom Martin, Ord	Otis Miller, Ord
Gage	Alan Langvardt, Beatrice	Louis J. Gogola, Jr., Beatrice
Hall	L. W. Hake, Grand Island	Gordon Francis, Grand Island
Hamilton	M. D. Jobman, Aurora	G. D. Penner, Aurora
Holt & Northwest	Melvin Campbell, Ainsworth	John Bryd, Valentine
Jefferson	Gordon O. Johnson, Fairbury	R. A. Blatny, Fairbury
Knox	D. M. Laflan, Creighton	D. J. Nagenzast, Bloomfield
Lancaster	C. L. Barton, Lincoln	M. A. Breiner, Lincoln
Lincoln	Dell Shepherd, North Platte	Timothy O'Holleran, North Platte
Madison	G. Tom Surber, Norfolk	C. Robert Adams, Norfolk
Metropolitan Omaha	Jerald R. Schenken, Omaha	F. F. Paustian, Omaha
Northeast	G. Tom Surber, Norfolk	C. Robert Adams, Norfolk
Northwest	Joel Hutchens, Gordon	R. H. Rasmussen, Chadron
Otoe	Dean R. Thomson, Nebraska City	Paul R. Madison, Nebraska City
Keith-Perkins-Chase	Bert W. Spencer, Ogallala	E. A. Holyoke, Ogallala
Platte-Loup Valley	Arthur Liebenritt, Columbus	Dwight Rickard, Columbus
Saline		Robert E. Tuma, Crete
Sarpy	Fred Gawecki, Papillion	Fred Schwartz, Papillion
Saunders	I. M. French, Wahoo	John E. Hansen, Jr., Wahoo
Scotts Bluff	Lowell Stratton, Mitchell	Vonn Roberts, Scottsbluff
Seward	Paul Plessman, Seward	Van Vahle, Seward
South Central	Jeff Hollins, Geneva	Chas. F. Ashby, Geneva
Southeast Nebr.	Gary Ensz, Auburn	George Voightlander, Pawnee City
Southwest Nebr.	David A. Allerheiligen, McCook	E. C. Beyer, McCook
Washington-Burt	H. Neal Sievers, Blair	K. C. Bagby, Blair
York	James D. Bell, York	Darroll J. Loschen, York

THE NEBRASKA MEDICAL JOURNAL

Ruptured Abdominal Aortic Aneurysm: Seven Years Experience in a Community Hospital

THE majority of abdominal aortic aneurysms are atherosclerotic in origin. Ninety-five per cent of these involve the infrarenal portion of the aorta. It is estimated that 2% of the elderly population in the United States has abdominal aortic aneurysms.¹ It is also estimated that every year in the United States, about 28,000 abdominal aortic aneurysms are reported and that 5,000 patients present with rupture of their aneurysm.² Estes has described the natural history of abdominal aortic aneurysms, based upon his experience with 102 patients.³ Sixty-three per cent of the deaths reported were due to the rupture of the aneurysm; and at the end of five years, only 19% of the patients were alive. Gliedman has reviewed patients with symptomatic abdominal aortic aneurysms, and found that 30% of these patients were dead within one month after the onset of symptoms, and 80% succumbed within the first year.⁴

Rupture is the most frequent and lethal complication of abdominal aortic aneurysms. In addition, these patients can have embolization into their peripheral vessels,⁵ spontaneous thrombosis of the aneurysm,⁶ infection,⁷ aorto-enteric fistula,⁸ aorto-caval fistula⁹ and consumption coagulopathy.¹⁰ In 1951, Dubost and his associates first reported elective repair of abdominal aortic aneurysms, and in 1953 the first repair of a ruptured abdominal aortic aneurysm was performed.^{11, 12, 13, 14} The purpose of this paper is to review our own experience in the treatment of ruptured abdominal aortic aneurysms.

Material and Methods

The records of patients diagnosed and treated for ruptured abdominal aortic aneurysms were reviewed retrospectively, from

DEEPAK M. GANGAHAR, M.D., F.A.C.S.*

STEPHEN W. CARVETH, M.D., F.A.C.S.

HERBERT E. REESE, M.D., F.A.C.S.

ROBERT J. BUCHMAN, M.D., F.A.C.S.

MICHAEL A. BREINER, M.D.

Bryan Memorial Hospital, 1600 South 48th Street,
Lincoln, Nebraska 68506

January 1978 through December 1984. During this period, a total of 53 patients were treated and followed from one to seven years. When first examined, 40 of these patients were in various grades of hypovolemic shock. All the patients in this series had pain in the lower abdomen or across the lower back. The onset of pain ranged from a few hours to ten days. One patient had experienced pain in his abdomen and low back for the past two months. Another was explored in a rural hospital for pain in the abdomen and was found to have an abdominal aortic aneurysm with a retroperitoneal hematoma. The abdomen was closed, and the patient was referred for appropriate treatment. Out of a total of 53 patients, 13 were hemodynamically stable when first examined, but had persistent low back pain of recent origin. They were found to have tenderness on palpation over the obvious expansile mass in the abdomen. No further radiological evaluation was done, and they were taken to surgery on a semi-urgent basis. In all cases, the diagnosis of a ruptured abdominal aortic aneurysm was based upon a history of lower back pain in the presence of an expansile mass and hypotension. For the purpose of this review, a "retro-peritoneal

*Address for Reprints: Deepak M. Gangahar, M.D., 5440 South Street, Suite 200, Lincoln, Nebraska 68506.

leak" is defined as a retroperitoneal hematoma which may extend into the mesentery, sigmoid mesocolon or pelvis, as long as the posterior parietal peritoneum is intact. If there is blood in the free peritoneal cavity, with or without the above findings, it is labeled as a "free rupture" of the aneurysm.

All patients had blood drawn for type and crossmatching and for other routine laboratory tests, but surgery was not withheld pending the availability of blood or test results. A Foley catheter, central venous line and arterial line were inserted in surgery. Autotransfusion has been used in every case since 1979. All patients were prepared and draped while awake with the surgeon and his team properly attired. After exploring the abdomen, the abdominal aorta was controlled, either below the renal artery or below the diaphragm. In the latter case, when the patient's blood pressure stabilized, the aortic clamp was reapplied below the renal arteries. Thoracotomy was not carried out to control the aorta in any case. After clamping the aorta, the patient was routinely given 12.5 grams of Mannitol or 40 milligrams of Lasix intravenously. No patient was given systemic Heparin. In 32 patients, a straight woven Dacron graft was used, whereas a bifurcated graft was employed in 21 cases. A bifurcated graft was used only when there was severe occlusive or aneurysmal disease of the iliac arteries. Fifty-one patients had infrarenal ruptured abdominal aortic aneurysms and two patients had extension of the aneurysm above the renal arteries. Fifty patients had an aortic aneurysm which was five centimeters or larger in diameter, whereas in three patients the aneurysm was smaller than five centimeters. Six of these patients were female, and all were 70 years of age or older. Postoperatively, a Swan-Ganz catheter was inserted in patients who showed hemodynamic instability.

Results

From 1978 through 1984, there has been no change in the operative results. The sample size for individual years is too small to draw any statistically significant conclusions.

In this series there were 53 patients with ruptured abdominal aortic aneurysms and 22 of them died, giving an operative mortality of 41.6%. There were 38 patients in the sixth and seventh decade of life and half of them died.

There were ten patients who were over the age of 80 years, and of these, nine survived the operation. Six patients were female and their ages ranged from 70 to 88 years. Four of these patients succumbed to their disease. One of the two patients with suprarenal extension expired. The death rate in patients with a preoperative creatinine greater than 2mg% was 70.5%, whereas it was 27.7% with a preoperative creatinine less than 2mg%. Acute renal failure was the primary factor in the death of these patients. (Table I) Patients with acute renal failure were treated aggressively with hemodialysis or slow continuous ultrafiltration.

TABLE I
Preoperative Serum Creatinine
&
Postoperative Mortality & Acute Renal Failure

	Total	Death		Acute Renal Failure	
		No.	%	No.	%
Serum Creatinine Less than 2mg%	36	10	27.7%	4	11.1%
Serum Creatinine Greater than 2mg%	17	12	70.5%	12	70.5%

The operative mortality in patients with free rupture versus retroperitoneal leak of the aneurysm was 81.25% and 21.6%, respectively. (Table II) Sixteen (51.6%) of the thirty-one surgical survivors left the hospital in less than thirteen days. One patient's postoperative course was complicated by abdominal wound infection and dehiscence.

TABLE II
Free Rupture Versus Retroperitoneal Leak
&
Postoperative Mortality

	Total	Death	
		No.	%
Free Rupture	17	13	76.4%
Retroperitoneal Leak	36	8	22.2%

Three patients out of a total of 22 deaths died in the surgery suite. (Table III) These three patients did have repair of their ruptured abdominal aneurysm, but blood pressure and cardiac rhythm could never really be restored throughout the operation. One of these three

patients required thoracotomy for cardioversion and internal cardiac massage. Two of the three patients who died in the surgery suite had free rupture of their aortic aneurysm.

TABLE III
Time of Death

	Death	
	No.	%
Intraoperatively	3	13.6
Within 48 hours	6	27.2
48 hours - 48 days	13	59.0
TOTAL	22	100%

Thirteen of the 22 patients who died following repair of their aortic aneurysm lived for more than two days and died of either acute renal failure, sepsis or multi-organ system failure. Six patients developed ischemic colitis. All the patients with ischemic colitis presented with fresh bleeding per rectum. One patient was explored and found to have extensive infarction of the ascending and transverse colon. He died secondary to sepsis and renal failure. Another patient with ischemic colitis was treated conservatively and left the hospital. The remaining four patients had multi-system failure in addition to ischemic colitis and did not survive. (Table IV).

TABLE IV
Major Postoperative Complications

Complication	Number
Acute renal failure	16
Acute respiratory failure	6
Ischemic colitis	6
Sepsis	3
Acute myocardial infarction	3
Necrotizing pancreatitis	1
Cerebrovascular accident	1
Aorto-enteric fistula	1
Abdominal dehiscence	1
Multi-system failure (respiratory, renal, GI bleed, liver)	9

Four of the 31 patients who survived surgery were operated on in 1978 and two (50%) are alive at the end of seven years. From 1978-

1980, eleven patients were operated upon and 5 (45.7%) of them were alive at the end of six years. From 1978-1982, 23 patients were operated upon, and 14 (60.8%) of them were alive for at least four years. Out of the ten patients who died after leaving the hospital, five died of cardiac causes, two due to cancer of the lungs, one from cancer of pancreas, and one from an unknown cause.

Discussion

As the population of the elderly in America is increasing, it is expected that more of them will develop abdominal aortic aneurysms and require treatment. Ultrasonography and computerized tomography of the abdomen will help diagnose small to medium size, non-palpable aneurysms. Elective repair of abdominal aortic aneurysms can be accomplished with 3% to 7% operative mortality.^{15, 16} Once this aneurysm ruptures, mortality and morbidity increases to 30-80%.¹⁷ (Table V)

Clinical diagnosis of ruptured abdominal aortic aneurysms is based on the triad of pain in the lower abdomen or low back, an expansile mass in the abdomen and hypotension. With this clinical picture, any further investigation is a loss of precious time. If a patient presents with lower abdominal or back pain, stable vital signs but tenderness over the expansile mass in the abdomen, it is the surgeon's responsibility to prove that it is not a case of an expanding or leaking abdominal aortic aneurysm. If the facility is available, and under ideal circumstances, an ultrasound or CT scan of the abdomen can confirm or rule out this diagnosis. If there is any question about the diagnosis, we tend to favor performing an exploratory laparotomy. Once a ruptured abdominal aortic aneurysm is suspected, blood should be drawn for type and crossmatch, a large gauge intravenous catheter should be inserted, and the patient should be referred to a center where treatment can be carried out. No attempts should be made to unduly replace the lost blood volume and vasopressor therapy should not be instituted. External pneumatic compression can be quite helpful, if used judiciously. A systolic blood pressure of 80 to 90 millimeters of mercury should be acceptable. Once the patient is stable, no time should be wasted in unnecessary laboratory or radiological workup. These patients have tendency for a sudden hemodynamic collapse. In surgery

TABLE V
Reported Series (1964-1984) of
Ruptured Abdominal Aortic Aneurysm
and Response to Treatment

	<u>No. Patients</u>	<u>Deaths</u>	<u>% Mortality</u>
1964 DeBakey et al	117	40	34
1964 Mannick et al	24	8	33
1965 Tracy and Reeve	28	12	43
1966 Coles et al	74	35	48
1966 Lawrence et al	65	34	52
1966 Szilagyi et al	79	46	58
1967 Kouchoykos et al	36	22	61
1968 Graham et al	107	58	54
1968 May et al	41	28	68
1969 Doderhoff and Cox	23	18	78
1969 Berne and Wilkinson	41	34	83
1969 van Heeckeren	57	34	60
1970 Alpert et al	40	17	42.5
1970 Gardner et al	24	13	54
1970 Lagaa'ij et al	100	38	38
1970 Darling	60	24	40
1972 Yashar et al	32	18	56
1972 Malan et al	44	30	68
1973 Shumacker et al	158	81	51
1975 Hicks et al	56	31	55
1975 Sink	33	20	61
1985 Gangahar (1978-1984)	<u>53</u>	<u>22</u>	<u>41</u>
TOTAL	1392	663	47.6

suite, a Foley catheter, central venous line and arterial line should be inserted. We find the cell saver or autotransfusion system extremely helpful. The surgeon and his team should all be robed and ready to operate before the patient is anesthetized.

In most of the cases we think that thoracotomy, in order to control the proximal aorta, is not necessary. In order to keep the operative time to a minimum, a straight graft is generally used, unless there is severe occlusive or aneurysmal disease involving the iliac arteries. Before releasing the aortic cross clamp,

correction of the fluid deficit and metabolic acidosis is crucial. In order to prevent hypothermia, plastic I.V. fluid bags should be warmed. Quite often ventilatory assistance is required in the postoperative period. A Swan-Ganz catheter is indicated in hemodynamically unstable patients.

We agree with Lawrie, et. al, that advanced age or severity of shock is no contraindication in operating on these patients.¹⁸ But our experience runs contrary to their inference that mortality increases directly with age. Out of ten patients over the age of eighty years, we

lost only one. We feel that the main factors determining operative mortality are the cardiopulmonary and renal reserves of these patients, rather than their chronological age alone.

A ruptured aneurysm which was smaller than five centimeters was found in 5.6% of our patients. In other series, this incidence varies from 10-18%. We feel that if the patient is in good general health, does not have any significant cardiopulmonary or renal disease, and lives in a remote area away from any medical center, even an aneurysm of four to five centimeters should be considered for elective surgical repair.

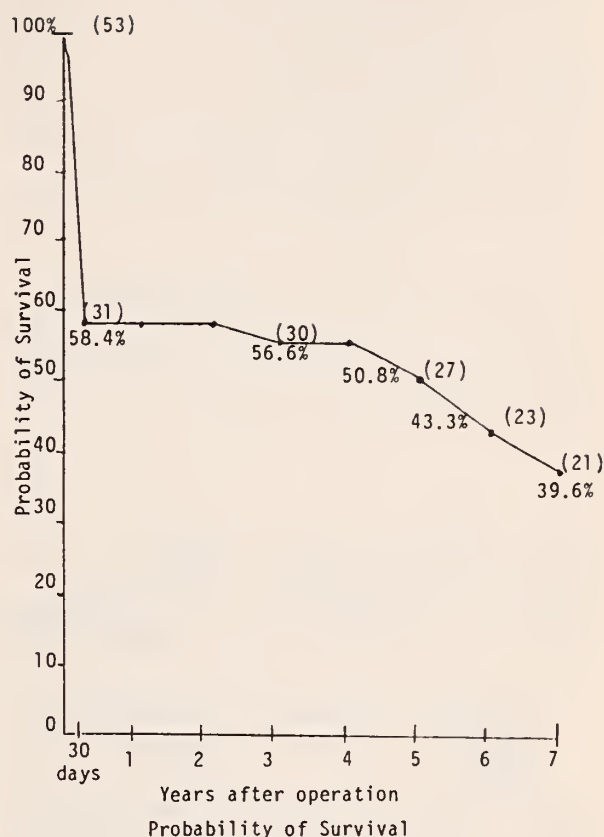
Despite aggressive hemodialysis treatment, 70.5% of our patients who had a serum creatinine greater than 2mg% died following surgery. This is in comparison to an incidence of acute renal failure of 11.1% in patients with a preoperative serum creatinine less than 2mg%. Similarly, free peritoneal rupture of the abdominal aortic aneurysm had a grave prognosis. In our series, it carried a mortality of 76.4% compared to a contained retroperitoneal leak which had an operative mortality of 22.2%. Sixteen (51.6%) patients left the hospital in less than thirteen days. The operative mortality for the entire series was 41.6%. When followed from one month to seven years, twenty-one patients in this series of fifty-three patients were alive. This gives a seven year survival rate of 39.6%. (Figure 1).

Ischemic colitis was seen in six patients (11.3%) in this series, and only one survived. This is a much higher incidence than what we had expected. It is reasonable to assume that these patients already had occlusion of their inferior mesenteric artery, but persistent hypotension further jeopardized the collateral circulation of the colon resulting in ischemia. Abdominal examination to diagnose ischemic colitis in these patients is unrewarding. The first clue to the diagnosis is fresh bleeding per rectum. Proctosigmoidoscopy should be helpful in the diagnosis. No effort should be spared in re-exploring these patients.

Summary

A seven year experience in the treatment of 53 ruptured abdominal aortic aneurysm as practiced in a community hospital is reviewed. Age was not found to be a significant factor in

FIGURE 1



the survival of these patients. An attempt was made to define free rupture from retroperitoneal leak of the abdominal aortic aneurysm. Patients with free rupture into the peritoneal cavity are hemodynamically very unstable and carry over three times higher operative mortality than retroperitoneal leak. Similarly elevated serum creatinine, though a crude measure of renal functions, carried almost three times increased mortality.

References

1. Bietz DS and Merendino KA: Abdominal aneurysm and horseshoe kidney: A review, *Ann Surg*, 181:333, 1975.
2. DeWeese JA, Blaisdell W, and Fater J. Optimum resources for vascular surgery. *Arch Surg*, 1972, 105:948.
3. Estes JE, Jr: Abdominal aortic aneurysm: A study of one hundred and two cases. *Circulation* 2:258, 1950.
4. Gliedman ML, Ayers WB & Vestal BL: aneurysm of abdominal aorta and it's branches. A study of untreated patients. *Ann Surg* 146:207, 1957.
5. Lord JW, Jr, Rossi G, Daliana M, Drago JR and Schwartz AM: Unsuspected abdominal aortic aneurysms as the cause of peripheral arterial occlusive disease. *Ann Surg* 177:767, 1973.
6. Johnson JM, Gaspar MR, Movius HJ and Rosental JJ: Sudden complete thrombosis of aortic and iliac aneurysms. *Arch Surg*, 108:792, 1974.

7. Jerrett F, Darling RC, Mundth ED, and Austen WF: Experience with infected aneurysms of the abdominal aorta. *Arch Surg*, 110:1281, 1975.

8. Levy JM, Todd DB, Lillehei CW and Varco RL: Aorticointestinal fistulas following surgery of the aorta. *Surgery*, 120:992, 1965.

9. Mohr LL and Smith LL: Arteriovenous fistula from rupture of abdominal aortic aneurysm. *Arch Surg*, 110:806, 1975.

10. Sieber WR and Natelson EA: Chronic consumption coagulopathy accompanying abdominal aortic aneurysm. *Arch Surg*, 111:539, 1976.

11. Dubost D, Allary M and Oeconomos NA: A propos du traitement des aneurysmes de l'aorte. *Mem Acad, Chir*, 77:381, 1951.

12. Bahnson HT: Treatment of abdominal aortic aneurysm by excision and replacement by hemograft. *Circulation* 9:497, 1954.

13. Cooley DA and DeBakey MD: Ruptured aneurysms of abdominal aorta. Excision and hemograft replacement. *Postgrad Med*, 16:334, 1954.

14. Shumacker HB, Jr, and King H: The use of pliable plastic tubes as aortic substitutes in man. *Surg Gynecol Obstet*, 99:287, 1954.

15. Stokes J and Butcher HR: Abdominal aortic aneurysm. Factors influencing mortality and criteria of operability. *Arch Surg*, 107:297, 1973.

16. Yashar JJ, Indeglia RA, Yashar J: Surgery for abdominal aortic aneurysm. Factors affecting survival and long-term results. *Am J Surg*, 123:397, 1972.

17. Sink JD, Myers RT, James PM: Ruptured abdominal aortic aneurysm. *The Am Surg*, 42:303, 1976.

18. Lawrie GM, Morris GC, et al: Improved results of operation for ruptured abdominal aortic aneurysms. *Surgery* 85:483-488, 1979.

The Management of Hemorrhoids: Update 1987

HEMORRHOIDS, the great equalizer, affects anyone without regard to gender nor social station. Prelates and common folk, saints and sinners, Emperors and presidents have all succumbed to the vicissitudes of that anal condition. Presidents Thomas Jefferson and Jimmy Carter, Casanova the self-acclaimed lover, astronomer Copernicus, and music composer Meyerbeer were all sufferers. Great generals were not spared. Don John of Austria, victor of the Battle of Lepanto against the Turks, died from bleeding hemorrhoids. The Battle of Waterloo may have perhaps had a different outcome had Napoleon not suffered from a severe attack of prolapsed thrombosed hemorrhoids on that day. Cardinal Richelieu and Martin Luther were afflicted. James I of England, Louis XI of France and Frederic the Great of Prussia were all troubled by the same condition.

The treatment of hemorrhoids has been largely conservative until the latter half of the nineteenth century and during the first two-thirds of the twentieth. Prior to the late 1800's, hemorrhoids were treated by poultice, bed rest, ligation, or by burning with a red hot iron (without anesthesia!). The latter was the least popular because of the severe pain, sepsis and demise of the patient which frequently accompanied this method. A favorite therapy

ALEXANDER N. KINGSLEY, M.D. F.A.C.S.
Colon and Rectal Clinic, Lincoln, Nebraska

was to pray for relief to the patron Saint of hemorrhoid sufferers, Saint Fiacre, who was also the patron saint of gardeners. The Irish priest Fiachra or Fiacrius, who died in 670 A.D., lived in the French region of Brie. His reputation as a healer made him a revered saint in France. Medical miracles continued to be attributed to him centuries after his death, but his name is mostly attached to the healing of hemorrhoids. In French, hemorrhoids are also known as "la maladie de St. Fiacre" (St. Fiacre's Disease). Supplicants of St. Fiacre included, not only ignorant impressionable peasants, but also the nobility and kings. The "Sun King" Louis XIV was a believer, and so was Henry V of England, who tried, unsuccessfully, to steal the Saint's remains and later died from hemorrhoids.¹

The founding of St. Mark's Hospital in London in 1835 by Frederic Salmon is a milestone in the treatment of anorectal disorders. Salmon is credited with the first published description of the ligation and

excision technique for internal hemorrhoids.² The ligature and cautery method preferred by most surgeons of the day was mercifully abandoned by the end of the century. As excisional hemorrhoidectomy became readily accepted by the patients and surgeons, surgical excision became the treatment of choice for all hemorrhoids. This trend continued until the 1960's when nonexcisional methods and more stringent selectivity for surgery began to emerge as appropriate therapy for hemorrhoids. The present tendency is towards conservatism and nonexcisional treatment of hemorrhoids.²

Anatomy and pathogenesis:

A variety of theories as to the origin and nature of hemorrhoids have been proposed. The traditional concept that they are varicosities of the hemorrhoidal plexus is no longer valid. The accepted modern view is that hemorrhoids are highly vascular "cushions" composed of blood vessels, smooth muscles, elastic and connective tissue. The cushions receive their blood supply from branches of the superior and middle hemorrhoidal arteries, and communicate with the inferior hemorrhoidal artery as well as branches of the veins corresponding to the arteries. There are three major cushions in the left lateral, right anterior, and right posterior positions. Small secondary cushions may be present between the major ones. Symptomatic hemorrhoids develop when the cushions become engorged because of abnormal dilatation of the venous plexus, abnormal distention of the arterio-venous anastomosis, and the downward displacement of the cushions.³ Increased intraabdominal pressure is the commonest cause of hemorrhoids, and may be secondary to pregnancy, chronic constipation, obesity, chronic cough, heavy physical labor, etc.

Hemorrhoids are classified by location and by severity. External hemorrhoids are located below the dentate line and are covered by squamous epithelium with somatic innervation. Internal hemorrhoids originate above the dentate line and are covered by transitional and columnar epithelium and are insensitive to pain or touch. Mixed hemorrhoids are a combination of both components. The degree of severity is classified according to the clinical manifestations of internal hemorrhoids. **First degree** refers to hemorrhoids which are

bulging within the anorectal lumen, and produce painless bleeding. **Second degree** internal hemorrhoids protrude during defecation but recede spontaneously. **Third degree** refers to prolapsing hemorrhoids which require manual reduction. **Fourth degree** hemorrhoids are prolapsed and irreducible. These incarcerated hemorrhoids may become thrombosed, ulcerated, or gangrenous.

Management:

The usual complaint of patients with hemorrhoids is bleeding or prolapse or both. Pain and itching are seldom present! Pain is only present if thrombosis, ulceration, incarceration or gangrene occur. Pruritus (itching) and usually accompanies chronic prolapse, swelling and seepage. The commonest cause of anal pain is fissure.

The treatment of pruritus ani is mostly anal hygiene and dietary modification. Inflammatory bowel disease and carcinoma often cause anorectal bleeding, and must be ruled out in any patient who complains of bleeding or of "hemorrhoids".

The mere presence of hemorrhoids is not an indication for treatment. Therapy is only necessary for symptomatic relief and for the correction of anatomical complications. Nonexcisional conservative methods should be applied whenever possible. Surgical intervention is reserved for grade IV or gangrenous hemorrhoids, or in cases where surgery is necessary for a concurrent anorectal condition such as a fissure, fistula or rectocele.

Constipation and hard stools should be prevented or corrected by the consumption of an adequate diet rich in fiber and liquids. Stools softeners and occasionally laxatives may be necessary. Dietary manipulation and patient education is often all that is needed in patients with first degree hemorrhoids.

A variety of non-surgical applications have been developed for the treatment of hemorrhoids. A few, however, have withstood the test of time and experience. Some others are too recent to make a definitive judgement as to their efficacy.

Anal Dilatation. Initially advocated by Recamier⁴ in the nineteenth century, and reprised by Lord in 1968,⁵ the procedure dilates the anorectum to an eight-finger

capacity. This reduces the intrarectal pressure and ameliorates the hemorrhoids. The unesthetic manipulation, the need for anesthesia, and the high incidence of fecal incontinence have greatly limited the use of this approach.

Sclerotherapy. Popular technique in England⁶ but seldom used in this country since the late 1960's. A sclerosing solution is injected directly into the submucosa, resulting in scarring, shrinking and fixation of the hemorrhoid. It is effective in grades 1 and 2. Its potential complications of mucosal sloughing, severe anal pain, acute thrombosis and sepsis have caused most practitioners to abandon its use.²

Cryogenic congelation. Hemorrhoids are destroyed by rapid freezing followed by rapid thawing.⁷ Local anesthetic infiltration is necessary. The posttreatment pain, swelling, weeping, odor, prolonged incapacity and healing time have made this an undesirable technique.²

Elastic band ligation. Simple, yet effective treatment for most forms of uncomplicated internal hemorrhoids. An elastic band is placed by an applicator around the base of the hemorrhoid, inducing eventual ischemic necrosis. The necrotic tissue sloughs off in a few days leaving behind a small granulating ulcer which heals within 2 weeks. Anesthesia is unnecessary; however, some patients may report mild aching or discomfort for a few days. These symptoms are easily relieved by oral analgesics.² Although simple, the technique must be performed with care to avoid catching sensitive anoderm within the elastic ligature which will result in severe pain. It should never be used to treat external hemorrhoids, and should be avoided in patients with coagulopathy. Recently, four deaths have been reported following elastic ligation of internal hemorrhoids. All deaths were attributed to deep perirectal and pelvic sepsis which followed the treatment and was not recognized by the physician.⁸

Infrared photocoagulation. Recently available in this country, this modality originated in Germany⁹ and is quite popular in Europe since 1978.¹⁰ Concentrated infrared light is focused by a photoconductor directly on the hemorrhoid causing tissue coagulation. The extent of coagulation is controlled by the

intensity and frequency of the light pulse and by the number of applications. Ulceration and scarring develop causing shrinking and fixation of the hemorrhoid. Anesthesia is not required when coagulation is correctly applied proximal to the dentate line. The success of this procedure is in direct proportion to the experience of the treating physician. Recent reports^{11, 12} confirmed its effectiveness in first and second-grade internal hemorrhoids, but proved inferior to elastic band ligation for prolapsing hemorrhoids.

Excisional hemorrhoidectomy nowadays should be reserved for complicated prolapsing hemorrhoids with unrelenting symptoms of pain and bleeding, or when associated anorectal conditions necessitate surgical intervention. Excisional treatment evolved from the Hippocratic technique of mass ligation and hot-iron cautery of hemorrhoids to the ligation and excision method of Salmon. The latter approach was fundamental in the development of the modern operative procedures. The closed (Ferguson)¹³ hemorrhoidectomy is the most recent and widely performed technique. The open method² is rarely used, and the submucosal (Park's) operation¹⁴ is the procedure of choice in England. The radical hemorrhoidectomy of Whitehead¹⁵ is mentioned only to be condemned because of its frequent and severe complications. Incontinence, anal stricture, ectropion of the rectal mucosa and "wet anus" are not uncommon postoperative results of the procedure.

Laser hemorrhoidectomy is used as either a coagulative/ablative treatment or as excisional therapy. It requires an anesthetic, and has the same convalescence and disadvantages of other excisional modalities in spite of claims to the contrary by companies promoting the sale of laser equipment. The disadvantages of excisional hemorrhoidectomy in general is the need for hospitalization, regional or general anesthesia, post operative pain and discomfort, and loss of worktime.

Special mention should be made about isolated thrombosed external hemorrhoids. These should be excised, and not only incised, under local infiltration anesthesia to avoid recurrence.

Summary

In conclusion, nonexcisional treatment of (symptomatic) hemorrhoids is the procedure of choice in most cases. The preferred methods are infrared photocoagulation of bleeding nonprolapsed internal hemorrhoids, and elastic band ligation for bleeding and/or noncomplicated prolapsing internal hemorrhoids. Surgical hemorrhoidectomy by the closed method is the preferred operation for irreducible and complicated internal hemorrhoids.

References

1. Bonello J, Cohen H, Gorlin R: Of Hemorrhoids. *Dis Colon Rectum* 28:702, 1985.
2. Kodner I, Fry R, Roe J: *Colon, Rectal and Anal Surgery*. St. Louis, 1985 C V Mosby Co
3. Corman M: *Colon and Rectal Surgery*. Philadelphia 1984. J B Lippincott Co.
4. Goldberg S, Gordon P, Nivatvongs S: *Essentials of Anorectal Surgery*. Philadelphia 1980. J B Lippincott.
5. Lord P: Conservative management of haemorrhoids. Part II: Dilatation treatment. *Clin Gastroenterol* 4:601, 1975.
6. Thompson J: Hemorrhoidectomy - How I do it: Current views in Britain. *Dis Colon Rectum* 20:173, 1977.
7. O'Connor J: The role of cryosurgery in the management of anorectal disease: a study of cryosurgical techniques. *Dis Colon Rectum* 18:298, 1975.
8. Russel T, Donohue J: Hemorrhoidal Banding: A Warning. *Dis Colon Rectum* 28:291, 1985.
9. Neiger A: Hemorrhoids in everyday practice. *Proctology* 2:22, 1979.
10. Leicester R, Nicholls R, Mann C: Infrared coagulation: A new treatment for haemorrhoids. *Dis Colon Rectum* 24:602, 1981.
11. Ambrose N, et al: Prospective randomized comparison of photocoagulation and rubber band ligation in treatment of hemorrhoids. *Br Med J* 286:1389, 1983.
12. Templeton J, et al: Comparison of infrared coagulation and rubber band ligation for first and second degree hemorrhoids: a randomized prospective clinical trial. *Br Med J* 286:1387, 1983.
13. Ferguson J, and Heaton J: Closed hemorrhoidectomy. *Dis Colon Rectum* 2: 176, 1959.
14. Parks A: Surgical treatment of hemorrhoids. *Br J Surg* 43:337, 1956.
15. Whitehead W: The surgical treatment of hemorrhoids. *Br Med J* 1:148, 1882.

Biography:

Louis J. Gogela, M.D.

LOUIS J. Gogela was born in Omaha, Nebraska in 1917. His father was a grocer, and both parents emigrated to Omaha from Czechoslovakia. Omaha had a large Czech community and young Louis learned to speak Czech at home. He came home crying from his first day of kindergarten since he couldn't understand the other children. He learned English very quickly, but to this day remains fluent in Czech. Lou participated in the rich social life of the Omaha Czech community, participating in gymnastics and summer camps sponsored by the Sokol Hall, a well known Czech organization which still exists today.

He received his Bachelor of Science from the University of Nebraska in 1940. He enrolled in the University of Nebraska Medical School, took extra time, obtained his Doctor of Medicine, and also a Master of Arts degree in neuroanatomy in 1943.

In 1943 he married Mildred Prazan at St. Wenceslas church in Omaha. In 1944 he began an internship at Alameda County Hospital in Oakland, California. At that time there were very few neurosurgeons in the Bay Area. He was offered a position as a partner with one of the local neurosurgeons but he would have been required to provide a lifetime income for the retiring neurosurgeon's wife, and so Doctor Gogela did not stay in California.

He began neurosurgery training at the Mayo Clinic but soon had to enter the military. Doctor Gogela served in Korea, and despite his training in surgery and interest in neurologic disease, did neither of these in the military. After this, he returned from overseas and resumed his training in neurosurgery at Mayo Clinic under Alfred W. Adson.

Doctor Adson was removing an unusual brain lesion on Doctor Gogela's first day as his second assistant. "Gogela!" said Doctor Adson, "take this tissue down to the clinic and ask Doctor Kernohan what it is, and be quick about it!" Doctor Kernohan, of course, was the prominent neuropathologist. Although not yet very familiar with Rochester or the Clinic, Lou

BENJAMIN R. GELBER, M.D.
Neurological Surgery
2221 South 17th Suite 310
Lincoln, NE 68502
(402) 475-4948

ran the half mile or so downtown from St. Mary's Hospital to the Clinic and breathlessly arrived in Doctor Kernohan's office. He waited while the tissue was frozen, cut, and then reviewed by Doctor Kernohan. Doctor Kernohan studied the slide for a few minutes. Then, without looking up, thrust the slide in Lou's hand and said "Tell Adson I don't know what the damn thing is!"

The greater part of Doctor Gogela's training was spent as first assistant to Doctor J. Grafton Love. It was here that Doctor Gogela mastered lumbar disc surgery, cervical discectomy by the posterior approach, craniotomy for pituitary tumor, and the Frazier-Spiller operation for trigeminal neuralgia and its variations. Doctor Gogela obtained an M.S. degree in neurosurgery for his work on optic nerve sheath meningiomas.^{1,2} He was offered a chance to study neuroophthalmology with Doctor Rucker and to join the clinic staff, but he left for Nebraska to begin neurosurgical practice.

Doctor Gogela had talked with J. J. Keegan about starting practice in Omaha, but Doctor Keegan thought Omaha was too crowded with neurosurgeons (he was the only one), so Lou went to Lincoln, Nebraska, and set up practice in 1950 as the only neurosurgeon and the first trained neurosurgeon in Nebraska outside of Omaha. In those days, medical malpractice was a curiosity. The first time Lou ever heard of malpractice insurance was when an insurance salesman tried to sell him some for \$50 per year. His office rent was \$100 per month and the fee for his first laminectomy was \$75.

There was no neurosurgical equipment in Lincoln at that time. Doctor Gogela bought a

complete set of instruments from V. Mueller in Rochester for about \$2,000 (his entire savings from his military days) and brought them to Lincoln. He had the hospital maintenance people build an overhead table for craniotomies and he built his own pneumoencephalogram chair for about \$5 worth of materials. Soon cerebral angiography came into common use and Doctor Gogela began doing these under general anesthesia using a #18 spinal needle. The films were pulled by hand. This practice continued until the late 1960's when automatic film changers were finally obtained by the local hospitals. He also began treating hydrocephalus with cerebrospinal fluid shunt procedures in 1952. He began with ventriculomastoidostomy, but abandoned this along with the rest of the neurosurgical community when the Spitz-Holter valve became available. Most of his early shunt patients are now in their 30's and leading productive lives.

Trauma was an important part of neurosurgical practice in those days, as it is now, and rapid transport was not available. One day he received a call from Hastings, Nebraska about a boy who received a head injury in a farm accident. Doctor Gogela gathered up his instruments, boarded the next train and traveled the hundred miles or so to Hastings, and operated on the boy. He took the next train home, and with no sleep, completed the next day's surgery and saw all of the office patients. Years later Doctor Gogela commented, "Not only was I never paid for that, but I had to buy my own train ticket."

In the early 1960's Doctor Irving Cooper described his still controversial technique of thalamotomy for Parkinsonian tremor. Doctor Gogela adopted these techniques, and using a Rand-Wells stereotactic unit, portable x-ray equipment, and a protractor from a local dime store, introduced functional stereotactic neurosurgery to Nebraska. Working with Mr. Robert Connelly, Doctor Gogela performed over 60 of these procedures with good results.

Doctor Gogela has participated in medical education throughout his career, even though he does not practice in an academic environment. He is a clinical professor of neurosurgery at the University of Nebraska Medical Center, and has introduced many medical students to neurosurgery. One student, Doctor John Green, is now a prominent neurosurgeon in Omaha,

and another, Doctor Steven Wald, is a member of the neurosurgery department at the University of Vermont. Doctor Gogela taught many classes of nursing students the fundamentals of neurologic disease, and through local discussion groups has helped keep the community at large informed.

Doctor Gogela has remained a leader in organized medicine. In 1951 he helped found the Congress of Neurologic Surgeons. He is a Delegate to the AMA and in 1985 was President of the Nebraska Chapter of the American College of Surgeons.

In 1981 during the Nebraska Czech Festival he received the King Charles Award, which is given to an individual whose prominence in his field has reflected credit and honor upon a person of Czech heritage.

In 1980, Doctor Daniel Ruge was chosen to become President Reagan's physician. Doctor Gogela was called by the White House to complete their review of Doctor Ruge's qualifications. Doctor Gogela also was a major contributor to the effort to pass Nebraska's medical malpractice limited liability law, which should serve as a model for other states.

Doctor Gogela remains among the leading surgeons in Nebraska, and is truly a pioneer neurosurgeon.

References

1. Craig, Winchell McK., M.D., and Gogela, Louis J., M.D. "Meningioma of the Optic Foramen as a Cause of Slowly Progressive Blindness", *Journal of Neurosurgery*, Vol. VII, 1950, pg. 44-48.
2. Craig, Winchell McK., M.D., and Gogela, Louis J., M.D., "Intra-orbital meningiomas: A clinicopathologic study, *Amer. J. Ophthalm.*, Vol. 32, No. 12, Dec. 1949, pg. 1663-1680.

MAYO CLINIC NEUROSURGERY RESIDENTS AND STAFF — JULY 1949

H. J. Svien	R. D. Weyand
Alfred Uihlein	R. J. Brzustowicz
G. S. Baker	F. A. Palazzo
J. Grafton Love	Emil P. Thielen
Collin S. MacCarty	Douglas Manning
H. W. Dodge	T. M. Marshall
C. E. Corcoran	J. L. Bostwick
A. B. Johnson	Dwight Parkinson
W. M. Craig	I. S. Cooper
A. W. Adson (7-22-49)	R. S. Anderson
B. W. Cannon	John A. Hetherington
D. A. Johnson	Richard Rotter
F. Earnest, III	Lee A. Christoferson
L. J. Gogela	

Fruits, Nuts and Centimeters

SURGEONS tend to describe the size of tumors by comparing them to certain fruits and nuts—"as large as a lemon", "the size of a walnut", "as large as a grapefruit". Others are more exact by recording the size in centimeters (or inches). The size of a fruit or nut is variable. Figure 1 depicts a large and small grapefruit, lemon and walnut—which size does the surgeon intend as a basis of measurement? A surgical colleague once advised his patient she had an abdominal tumor the size of a lemon. The following day she returned to his office with a Ponderosa lemon almost the size of a football (sic) and inquired if he meant that size lemon. A newspaper article some months ago reported that a tumor the size of a walnut was excised from an accused murderer's brain. The size of the walnut was not given. Certainly, the size of a brain tumor located in a critical area would make a vast difference in the neurological findings and effects. Comparing

Figure 1



HARRY PERELMAN, M.D., F.A.C.S.*
Westside Hospital, Los Angeles, CA

Figure 2



the size of the tumor to a golf ball or tennis ball, which are each approximately 43mm and 65mm in diameter (Figure 2), might be acceptable since these are recognized and established sizes. The golf ball diameter is not less than 1.680 inches (42.67mm).¹ The English golf ball diameter limit is no smaller than 1,620 inches (41.15mm). There is no limit on the maximum size of a golf ball. There is a golf ball manu-

*Reprint requests to Harry Perelman, M.D., 10 Mt. Holyoke Drive, Rancho Mirage, CA 92270.

factured in America which is 1.73 inches (44mm) in diameter. The tennis ball is more than 2.50 inches (6.35cm) and less than 2.625 inches (6.67cm) in diameter.² However, even though there is only a slight variance allowed for the diameter of these balls, comparing tumors with balls does not appear very scientific. Since the size of fruits and nuts is obviously variable, a more exact and precise measurement should be used. Recording the size in centimeters, millimeters or inches is a much more accurate, understandable and scientific method. The

usage of balls, fruits and nuts as a reference of size should be eliminated.

Summary:

Comparing tumor size to fruits or nuts is inexact and unscientific. Replacement by metric measurements is recommended.

References

1. The Rules of Golf United States Golf Association Far Hills, NJ 07931 1986 pg 93.
2. The Official USTA Tennis Yearbook and Tennis Guide, H.O. Zimman, Inc., Lynn, MA 01901, 1986 pg 620.

FRACTURE OF THE MONTH

Recurrent Wrist "Sprain" from an Unrecognized Scaphoid Fracture

THE diagnosis of post-traumatic wrist pain, whatever the mechanism of injury, is one of the more difficult problems in orthopaedics.^{1, 2} Wrist fractures and sprains occur most commonly between the ages of 15 and 30 years in men who are active athletes and laborers. Frequently the injury results from minor trauma and can cause minimal symptoms initially. In fact, the patient may dismiss the problem as a sprain and not even seek medical treatment. However, all such "sprains" should be considered as a fracture or at least a potentially significant disruption of the carpal ligaments, until proven otherwise. This present case illustrates that persistent follow-up, repeat examination and specific diagnostic studies are necessary to properly diagnose some of these more perplexing problems.

Case Report

The patient, a 20 year old college football offensive lineman, fell on his outstretched left hand four weeks prior to presentation. At that time he noticed left wrist pain and tenderness. X-rays were interpreted as normal but because of the patient's symptoms, the wrist was immobilized in a cast for two weeks. X-rays repeated with the wrist out of plaster again were interpreted as normal. However, when the patient returned to athletics he continued to be bothered by wrist pain and was then referred to our hand clinic for further evaluation. At that time, approximately one month after the initial injury, he complained of pain and tenderness dorsally in the wrist with some slight limitation of wrist motion. Repeat x-rays once again were normal (Figure 1). He was once again placed in a short arm cast for three weeks, after which his tenderness remitted although his motion was slightly limited. However, two weeks later he returned to the clinic, again with wrist pain associated with activity, especially on dorsiflexion of the wrist. On physical examination he had tenderness in the lunate and scapholunate region, but not particularly in the snuffbox.

JOHN F. CONNOLLY, M.D.

SAMUEL E. SMITH, M.D.

THOMAS P. FERLIC, M.D.

From the combined programs in Orthopaedic Surgery, University of Nebraska Medical Center, Creighton University, Omaha Veterans Administration Hospital, 42nd and Dewey Avenue, Omaha, NE 68105-1065

Discussion - Differential Diagnosis

The differential diagnosis of persistent wrist pain or recurrent sprain includes a number of possibilities. Any of the carpal bones are subject to fracture³ but some present more



Figure 1

The initial x-ray is shown here. The wrist is in ulnar deviation showing the scaphoid in longitudinal profile, sufficient for showing most scaphoid fractures.

than the usual diagnostic difficulties. In a previous "Fracture of the Month"⁴ we discussed hamate fracture, a frequently overlooked source of persistent wrist pain. This results from a direct blow to the hypothenar region and is difficult to detect unless specific carpal tunnel views are obtained that visualize the hook of the hamate. In contrast with hypothenar pain, pain on the thenar side of the wrist must be carefully considered as arising from either a fracture of the scaphoid or a dissociation and disruption of the scapholunate joints. Scapholunate dissociation is a true wrist sprain which results from tears of the ligaments between the scaphoid and the proximal and distal carpal rows. This disruption causes the scaphoid to rotate palmarward and the lunate to tip dorsally. Eventually the distal row will collapse on the proximal row and symptomatic osteoarthritis results.⁵ This sequence may be aborted with early diagnosis and restoration of the relationships between the scaphoid and the proximal and distal carpal rows. Scapholunate dissociation was the initial working diagnosis in this patient. Ordinarily scaphoid fracture should be the major consideration with persistent wrist pain. However, if the initial x-rays do not demonstrate either fracture or subluxation in a swollen wrist, a trial three week period of cast immobilization is

indicated, as was done twice for the present patient. In most instances x-ray of the wrist including a true lateral, and AP view with the wrist in neutral, ulnar and radial deviation and a view of the supinated wrist with the fist clenched should demonstrate either the scaphoid fracture or dissociation. However, all these studies in this particular patient showed no abnormality. Therefore, because of the persistent pain, a bone scan⁶ was ordered with the possibility that an inflammatory process from a osteoid osteoma, avascular necrosis of the lunate, infection or fracture might be the underlying cause of the symptoms. The well defined hot spot seen in the scaphoid (Figure 2) lead to tomographic studies (Figure 3) which finally demonstrated the fracture line through the mid-scaphoid.

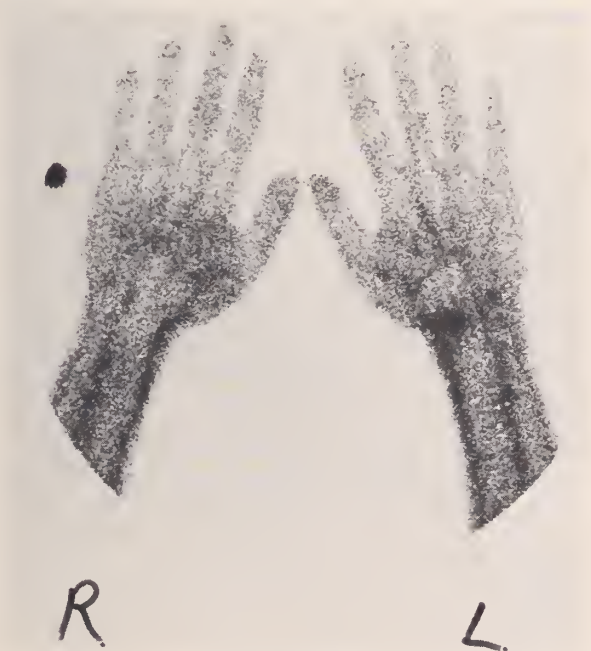


Figure 2

The bone scan which was obtained revealed an area of increased uptake in the region of the left scaphoid on the delayed images



Figure 3

The tomograms of the left wrist shown in this figure reveal a fracture at the junction of the proximal one-third and distal two-thirds of the scaphoid.

Management

When the bone scan and tomography confirmed the diagnosis of scaphoid fracture, the patient was treated in a short arm thumb spica for 15 weeks. This prolonged period of immobilization was necessary because of the patient's desire to play football. The cast was removed when the patient was away at college. His tenderness had resolved, but motion was still slightly limited. X-rays out of plaster showed healing of the scaphoid fracture. Range of motion improved as the patient

continued out of plaster and he had no further recurrence of his wrist pain.

Summary

This case demonstrates that a high index of suspicion must be maintained in evaluating any patient with post-traumatic wrist pain. The differential is extensive and the problem can be perplexing. Careful physical examination, close follow-up and specific radiographic assessment including bone scan and tomography usually reveal the answer to the persistent clinician.

References

1. Connolly JF: De Palma's Management of Fractures and Dislocations, An Atlas. Pg 1061. W. B. Saunders Co. 1981.
2. Dobyns JH, Green DP, Howard FM, Belsole RJ and Malone CP: Symposium: Complicated wrist fractures. *Contemp Orthop* 6:89-122, 1983.
3. Bryan RS and Dobyns JH: Fractures of the carpal bones other than lunate and navicular. *Clin Orthop* 149:107-111, 1980.
4. Connolly J, Guse R: Wrist pain due to an unrecognized hamate fracture. *Nebr Med J* 71:438, 1986.
5. Sebald JR, Dobyns JH and Linscheid RL: The natural history of collapsed deformities of the wrist. *Clin Orthop* 104:140-148, 1974.
6. Nielsen, PT, Hebeboe J and Thommesen P: Scintigraphy in the evaluation of fracture of the carpal scaphoid bone. *Acta Orthop Scand* 54:303-306, 1983.

PERINATAL PAGE

Obstetrical Ultrasound: The Role of Ultrasound in the Term and Post-Term Pregnancy

ULTRASOUND in the first and second trimester of pregnancy has been well documented for establishing gestational age, diagnosing twins and identifying congenital malformations of a severe degree. Often, however, a patient presents close to term without an established gestational age. Because the biparietal diameter and other anatomical measurements have such a wide standard deviation, their use in predicting fetal age is less reliable than when taken in early gestation. However, there are several parameters which can be utilized and assist the clinician in the management of the patient.

In 1979, Grannum, et al³ described placental grades classified in relation to ultrasonographic findings at the basal and chorionic plates, as well as the substance of the organ itself. They suggested a high association between the most mature form, i.e., grade III, and mature pulmonary status of the newborn. There are two observations regarding the finding of grade III placentas that should be appreciated by the clinician. First, the number of grade III placentas at term varies anywhere from 7-25% of the obstetrical population scanned.⁵ Second, in the majority of cases, although not with absolute certainty, the presence of the grade III placenta is suggestive of pulmonary maturation. In the same review, the association between grade III placentas and L/S ratios of greater than two was 95% (121 of 127 cases).

On the other hand, a grade III placenta found at a time earlier in gestation may be indicative of intrauterine growth retardation.

Patterson, et al⁹ reported on a series of 398 patients of whom 51 had early placenta maturation, defined by the presence of a grade III placenta found at 34 weeks or less gestational age. In this population intrauterine growth retardation was detected in 17%, in comparison to a control population where the

J. PATRICK LAVERY, M.D.

Associate Professor, Department OB/GYN, University of Louisville, Louisville, KY 40292

incidence of this problem was only 4.1%. Haney, et al⁴ reported on ten patients who showed patterns of placental aging consistent with the grade III placenta as early as 31 weeks; in his series, eight of the ten patients suffered from intrauterine growth retardation or fetal death. Kazzi, et al⁶ reviewed placental grading in a series of 109 pregnancies with birth weights of less than 2700 grams. The presence of a grade III placenta was followed by the delivery of a small-for-gestational-age infant 59% of the time; and in gestational ages of less than 34 weeks, a grade III placenta had a true positive diagnosis of small-for-gestational-age infants in 62% of cases.

Another use of ultrasound in the assessment of fetal well-being in post-term pregnancy is the amount of amniotic fluid which may be present. In reviewing the outcome of 109 post-date pregnancies, Eden et al¹ found that using non-stress testing coupled with ultrasound for fetal activity, amniotic fluid volume and overall assessment led to a corrected mortality rate of zero.

Leveno, et al⁷ demonstrated in a series of 59 babies with fetal distress associated with post-datism that the pathophysiology of fetal distress in prolonged pregnancy was typically associated with oligohydramnios leading to compromised umbilical cord perfusion.

Moya, et al⁸ found that in 85 post-term pregnancies no grade 0 or grade I placentas were observed. Grade II and III placentas were observed with similar frequency. True post-maturity occurred in 13% of the patients. Oligohydramnios was very common among the

pregnancies resulting in postmaturity being found in 82% of cases. Thus, while the grading of a placenta is suggestive of maturation, it cannot be used to diagnose postmaturity syndrome. On the other hand, oligohydramnios with a grade III placenta is extremely suggestive of this problem.

It would be appropriate clinical management in the post-term pregnancy to incorporate ultrasonographic assessment, certainly by 42-43 weeks gestational age, to look for characteristics of placental aging and amniotic fluid volume. In general, pockets of amniotic fluid of less than one to two centimeters are considered oligohydramnios, although the definition of this is still discussed by various authorities. The normal decrease in amniotic fluid volume² must be anticipated, but severe deficiencies of amniotic fluid are most distinctly associated with adverse perinatal outcome. On the other hand, the finding of an early-aging placenta, i.e., grade III placenta before 34 weeks and particularly when associated with oligohydramnios, has a high correlation with intrauterine growth retardation as well as possible

congenital anomalies of the GU system. Careful fetal assessment and management is necessary.

References

1. Eden RD, et al. Comparison of antepartum testing schemes for the management of the postdate pregnancy. *Am J Obstet Gynecol* 144:683-692, 1982.
2. Fairweather DVL, et al (eds.). **Amniotic Fluid Research and Clinical Application**, 2nd Edition, cerpta Medica, Amsterdam, 1978.
3. Grannum PAT, et al. The ultrasonic changes in the maturing placenta and their relation to fetal pulmonic maturity. *Am J Obstet Gynecol* 133:915-922, 1979.
4. Haney AF, et al. The sonolucent placenta in high-risk obstetrics. *Obstet Gynecol* 55:38-41, 1980.
5. Hopper KD, et al. A reevaluation of placental grading and its clinical significance. *J Ultrasound in Medicine* 3:261-266, 1984.
6. Kazzi GM, et al. Detection of intrauterine growth retardation: a new use for sonographic placental grading. *Am J Obstet Gynecol* 145:733-737, 1983.
7. Leveno KJ, et al. Prolonged pregnancy. *Am J Obstet Gynecol* 150:465-473, 1984.
8. Moya F, et al. Ultrasound assessment of the postmature pregnancy. *Obstet Gynecol* 65:319-322, 1985.
9. Patterson RM, et al. Ultrasonographically observed early placental maturation and perinatal outcome. *Am J Obstet Gynecol* 147:773-777, 1983.

President's Page

TAKING CHARGE OF CHANGE

Three years ago, Doctor Reese spoke to us on "Medicine in Transition." The following year, Doctor Donahue's topic was "Adjusting After Transition." Last year, Doctor Walker discussed "Challenges in Medicine." To attempt to maintain some continuity, I have arrived at the title "Taking Charge of Change."

To continue along the idea of continuity with previous papers presented to the Nebraska Medical Association, I would like to quote from an article by a gentleman from Kimball, Nebraska, Dr. A. L. Miller: "There has been a growing feeling of unrest concerning the doctor, the cost of illness, the hospital, nurses, and the proper care of the individual who may be sick. This is evidenced by the number of articles written by both medical men and laymen concerning the different phases of medicine." This quotation is taken from the proceedings of the Nebraska Medical Association in May 1931.

I point this out to you to stress the fact that change in medicine technologically, scientifically, and in the field of third-party interference is not new. Change has come and will continue to come and medicine will continue to meet the changes. It takes on many forms. Organized medicine is changing, alternate delivery systems are upon us, third-party interference, especially the government, is here and increasing; professional liability, scientific and technical changes, competition, entrepreneurialism, and many others are here and will continue. We must, therefore, take charge of the changes.

We are faced with changes. The practice of medicine is still the greatest profession in the world. My wife, who is my greatest supporter and severist critic, says that I would be less egotistical and should say that it is one of the greatest professions in the world, but it is certainly the greatest profession for me. The one-to-one patient relationship is tremendously satisfying. It is undoubtedly ego-building and certainly pleasurable. There is nothing that I know of that is more satisfying. The practice of medicine is fun, it is exciting, it is



L. Dwight Cherry, M.D.

stimulating. I am sure that every physician has many stories to tell of the fun things in his day-to-day practice.

One of my favorite stories is that of a friend, who asks that I not use his name, walking into the old Lincoln General Hospital doctors' lounge to use the phone and picked up the receiver and got no dial tone. He went to the OR supervisor's office and the same thing occurred. I suggested he go across the hall to the post-anesthesia recovery room to use that phone; he picked it up, again no dial tone, and he said, "Oh hell, they are all dead." Whereupon a little old man who had just had an operative procedure sat and up and said, "I'm not!"

I could go on indefinitely telling many other fun stories about my 40 years of practice during which time I looked forward to going to work each and every morning — who besides physicians can say this about their profession? It is extremely gratifying, ego-building, and self-fulfilling.

The outlook for the profession is bright. Everywhere the physician is better trained, better equipped, disease is more thoroughly studied and more skillfully treated. Human suffering has certainly been reduced. Many wonderful advances are on the horizon. Scien-

tific and technical advantages are even more impressive if one looks back. None of us would want to turn back the clock.

For example there was the time our President was heavily sedated with phenobarbital to try to relieve his hypertensive headaches and was the leader of the free world as we were coming forth from World War II. The changes in the care of cardiac patient are extremely impressive. First, from a pharmacological standpoint, and secondly with the three substitute hearts that we now have. The first two being well-established, the third being as yet, experimental. I refer to the heart-lung bypass used for open heart surgery and the cardiac transplant used for end-stage heart disease and thirdly, the truly substitute heart which is of course, experimental. One could go on indefinitely with the examples of changes in the scientific and technological advances, none of which we would want to roll back.

Medicine's embrace of science has been almost total. The physicians have been seduced by the disarming simplicity and certainty of technology. And, because of that, power in the medical establishment has shifted from the clinician to the scientist. The physician's role model is now more the medical scientist rather than the clinician. None of these are likely to change, at least right away, but there are flaws in some of what is going on. There is much more to "physicianship" than a mastery of science and technology. Certain things are important to remember about science: all science is value-free, it is amoral, it deals primarily with general laws, it is impersonal. On the other hand, medicine has a long tradition of values and deals with persons as individuals whose personal needs and ailments are not often described or measured in scientific terms. While medicine and science have become inextricably bound, they are not and cannot be one and the same. The assumption that medicine is now all science is simply not valid. Those who favor this view seem to forget that patients come to physicians or to the medical establishment seeking help.

There is no one best way to practice medicine. While the majority of us have spent our careers on a fee-for-service basis, we must remember now that approximately 25% of the physicians in the United States are employed physicians. Among the female physicians,

approximately 40% are employed physicians. There are many factors which bring about this change, such as the high debt when medical training is completed and the changing lifestyle proposed, particularly by the younger physicians. There will undoubtedly be further changes in this regard, but that does not mean they are wrong. But we must take charge of these changes. As your President, I will be your advocate regardless of your type of practice.

The AMA and other parts of organized medicine are facing these inevitable changes and developing strategies to take control of the changes. I would like to quote from the Board of Trustees of the AMA's key objective: "The key objective of the American Medical Association is to contribute to the professional and personal development of member physicians and to the betterment of the health of the public by developing and distributing information, by advocating health-related rights, responsibilities and issues, and by representing the profession as a whole, where the image, the expertise and national scope of the AMA prove useful. This is to be done in a manner that is cost-effective, protects physicians' autonomy and self-determination, improves the practice of medicine, and builds public confidence in the competence and reliability of physicians."

This is just another example of why we should all be active in organized medicine as it continues to take charge of change. We must accept the challenge of leadership. You were not admitted to medical school because you were stupid, you did not complete your post-graduate residency training because you were timid and afraid to assume responsibility. You are not here now because of a lack of interest in organized medicine. All of these qualities are qualities that are demanded of leaders. We must accept the leadership in taking charge of change. If we don't, we will be followers rather than leaders. The medical profession didn't get where it is today by being followers. As Harry Truman so aptly said, "The buck stops here."

Many changes are going to be taking place because of the aging of our population. Some of these changes will be on the downside as Medicare Part B puts a greater squeeze on physicians, both financially and in decision-making. This will undoubtedly cause some erosion of physician income and patient loyalty. But, on the upside, we are in a field of

expanding geriatrics in which the patients use our services three times more often than they did before. We undoubtedly will be moving into areas of prevention and wellness among these older patients. The physician of the future will have to become comfortable with providing care and the managing of these older patients and their problems. It will undoubtedly be an attitude of "to fix things" rather than to cure with ongoing care and management information. We will have to make decisions along with our patients and their families of when to "quit."

In summary, let me say that if we take charge of the changes, we won't have to listen to those

harbingers of doom and gloom who are heard mainly at cocktail parties. I never put much stock in anyone who points to the future with a swizzle stick. If we continue to maintain our professionalism, maintain our caring, our compassion and charity, and remember that quality of care and accessibility are not negotiable, what wonderful opportunities we and those who follow us will have for service, professional fulfillment and personal satisfaction. But we must take charge of maintaining and enhancing the confidence that our patients and the public have in our profession. We must not stand idly by while others seek to turn us into a public utility. Take charge of the changes!

Creighton University School of Medicine News

CREIGHTON SCHOOL OF MEDICINE FACULTY RECOGNIZED BY STUDENTS

Creighton University School of Medicine students Saturday night recognized seven faculty members at the medical students' annual Golden Apple Awards Dinner, held at the Red Lion Inn Grand Ballroom.

Recognized at the banquet as the outstanding teachers for the 1986-1987 academic years were: Dr. Michael Wilmot and Dr. Jay Brzezinski, best clinical faculty; Dr. Dwaine Peetz Sr., outstanding contributed-service faculty member; Dr. Eugene Sanders and Dr. Arthur Dalley, best basic science faculty; and Dr. Gregory Ross and Dr. Bill Jurgensen, best house staff.

The Aesculapian Award also was presented at the banquet to one student from each class in recognition of his services, leadership skills and humanitarianism. Receiving this year's award were Andrew Gentile, a freshman; Joseph Townley, a sophomore; George Hutfless, a junior; and Tom Schmitz, a senior.

The recipients of both the faculty and student awards were chosen by Creighton medical students.

CREIGHTON SCHOOL OF MEDICINE HONORS FACULTY MEMBERS

The Creighton University School of Medicine recently recognized six of its faculty members for their contributions to the school and the medical profession.

Recipients of the third annual awards are:

— Dr. W. Eugene Sanders, Distinguished Professor Award. Dr. Sanders, chairman of the Department of Medical Microbiology since he joined Creighton's faculty in 1972, is internationally known for his research of human

resistance problems associated with new generations of antibiotics.

— Dr. Robert R. Recker, Distinguished Research Career Award. Dr. Recker, director of Creighton's Metabolic Research Unit, has received nearly \$5 million in research grants during his 16 years at Creighton. His work has had a major influence on the research and treatment of osteoporosis.

— Dr. George O. Clifford, Master Clinician Award. Dr. Clifford, a professor of medicine, joined Creighton in 1972 and formerly served as chairman of the Department of Medicine. His award recognizes his diagnostic skills, treatment of diseases and care of patients.

— Dr. J. Daniel Egan, Dedicated Teacher Award. Dr. Egan, a professor of medicine, has been the recipient of numerous other teaching awards, including the School of Medicine's Distinguished Professor Award.

— Dr. Frank J. Iwersen, distinguished service award. A member of the Creighton faculty since 1939, Dr. Iwersen is a clinical professor of orthopedic surgery and a former chairman of the Department of Orthopedic Surgery. He has served as the orthopedic physician for the Creighton men's and women's athletic teams for many years.

— Dr. Fred J. Pettid, Distinguished Continuing Medical Education Faculty Award. Dr. Pettid, an associate professor of family practice, has been associated with Creighton since 1971. He is a former chairman of the Department of Family Practice.

Five recipients of the 1987 awards were selected from a group of nominees reviewed by a School of Medicine Committee on Faculty Recognition. Creighton's Continuing Education Committee chose Dr. Pettid as the recipient of its award.

Coming Meetings

UNIVERSITY OF NEBRASKA MEDICAL CENTER

UPDATE ON GENERAL PEDIATRICS — June 28-July 2, 1987 at Jackson Hole Racquet Club, Jackson, WY. Sponsored by the Department of Pediatrics, UNMC.

SPORTS MEDICINE UPDATE 1987 — July 5-9, 1987 at the Jackson Hole Racquet Club, Jackson, WY. Sponsored by the Department of Orthopaedic Surgery and Rehabilitation, UNMC.

CARDIOVASCULAR DISEASE PREVENTION IN THE YOUNG AND THE ADULT — August 2-5, 1987 at the Snowmass Club, Snowmass, Colorado. Sponsored by UNMC.

EMERGENCY MEDICINE REVIEW — September 21-26, and October 5-10, 1987 at the Center for Continuing Education, UNMC, Omaha, NE 45 hours of ACEP Category I credit and 45 prescribed hours by the AAFP and AMA Category I.

For further information or to register for the above courses contact: Marge Adey or Brenda Ram, Center for Continuing Education, University of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, Nebraska 68105. Telephone (402) 559-4152.

UPCOMING UNMC CONTINUING EDUCATION COURSES

ADVANCED CARDIAC LIFE SUPPORT — June 1, 1987 — Recertification. Omaha, Nebraska. Registration Fee: \$50. 7.2 Hours AMA Category I.

ADVANCED TRAUMA LIFE SUPPORT — March 23-24, May 28-29, September 28-29, 1987. Omaha, Nebraska. Fee: \$475. 17.0 Hours AMA Category I. 17.0 Prescribed Hours AAFP. 17.0 Hours ACEP Category I. For further information on these three courses contact Cindy S. Hanssen, University of Nebraska Medical Center, Center for Con-

tinuing Education, 42nd & Dewey Avenue, Omaha, Nebraska 68105-1065. Phone (402) 559-4152. In Nebraska, call: 800-228-1095. All other states, call: 800-228-9630.

For further information, contact Ann Fitzgerald, University of Nebraska Medical Center, Center for Continuing Education, 42nd & Dewey Avenue, Omaha, Nebraska 68105-1065. Phone (402) 559-4152. In Nebraska, call: 800-228-1095. All other states (except Alaska), call: 800-228-9630.

LINCOLN GENERAL HOSPITAL

THE SIXTH ANNUAL CORNHUSKER/CANADIAN CLINICAL CONFERENCE — June 20-27, 1987 at Lynn Lake, Manitoba, Canada. Fee: \$150. For information contact: Sharlene Knippelmeyer, RN, BS, Education and Staff Development, Lincoln General Hospital, 2300 South 16th Street, Lincoln, NE 68502, (402) 473-5638.

CREIGHTON UNIVERSITY

MAURICE E. GRIER SYMPOSIUM (OB/GYN) — June 6, 1987, Marriott Hotel, Omaha, Nebraska. Program Director: James W. Daly, M.D. Fee \$30, 4.5 credit hours Category I.

WHAT YOU NEED TO KNOW ABOUT PERINATAL ULTRASOUND — June 12-13, 1987, Red Lion Inn, Omaha, Nebraska. Program Director: Washington C. Hill, M.D. Fee: \$195 for physicians, \$100 for nurses, 13.5 credit hours Category 1.

PEDIATRIC RHEUMATOLOGY — August 6-8, 1987, The Boys Town National Institute, Omaha, Nebraska. Program Director, James T. Cassidy, M.D. Fee: TBA, Credit Hours: TBA.

GYNECOLOGIC LASER OUTPATIENT SURGERY — August 28-29, 1987, Creighton University School of Medicine. Program

Director: Thomas S. Pruse, M.D. Fee: TBA, Credit Hours: TBA.

AMERICAN MEDICAL WOMEN'S ASSOCIATION REGIONAL CONFERENCE — September 19-20, 1987, Holiday Inn Central, Omaha, Nebraska. Program Coordinator: Rose Faithe, M.D. Fee: TBA, Credit Hours: TBA.

A DAY WITH THE PERINATOLOGISTS — September 25-26, 1987, Red Lion Inn, Omaha, Nebraska. Program Director: Washington C. Hill, M.D. Fee: TBA, Credit Hours: TBA.

CONTROVERSIES AND CLINICAL MANAGEMENT IN HIGH RISK OBSTETRICS — October 29-31, 1987, Claremont Resort Hotel, Oakland, California. Program Director: Washington C. Hill, M.D. Fee: \$350 for physicians, \$240 for nurses and residents if paid before Sept. 29. 16.5 credit hours Category 1.

VISITING PROFESSOR SCHEDULE — 1987

September 11-12, 1987

John Cameron, M.D., Surgeon-in-Chief, The John Hopkins University, Department of Surgery, Baltimore, Maryland.

October 23-24, 1987

Hiram C. Polk, Jr., M.D., Professor and Chairman, Department of Surgery, University of Louisville, School of Medicine, Louisville, Kentucky.

For further information or to register, contact: Creighton University School of Medicine Division of CME, Omaha, NE 68178, 402-280-2550 or outside Nebraska Toll free 800-228-7212, Ext. 2550. The Creighton University School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.

UNIVERSITY OF COLORADO SCHOOL OF MEDICINE Summer and Fall 1987

THIRTY-THIRD ANNUAL FAMILY PRACTICE REVIEW — June 14-20, 1987, YMCA of the Rockies, Estes Park, CO.

Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

PEDIATRIC INFECTIOUS DISEASE IN THE OFFICE PRACTICE — June 29-July 3, 1987, The Gant, Aspen, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

"THE PITUITARY IN ASPEN" — July 9-11, 1987, Given Institute of Pathobiology, Aspen, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

TWENTY-THIRD ANNUAL INTERNAL MEDICINE PROGRAM—July 12-17, 1987, YMCA of the Rockies, Estes Park, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

DYNAMIC PSYCHOTHERAPY: THE THERAPEUTIC BOND — July 27-31, 1987, Given Institute of Pathobiology, Aspen, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

PEDIATRIC SPORTS MEDICINE - NORTH AMERICAN SOCIETY OF PEDIATRIC EXERCISE MEDICINE (NASPEM) — July 31 - August 2, 1987, Given Institute of Pathobiology, Aspen, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

THIRTIETH ANNUAL PEDIATRIC PROGRAM — August 3-6, 1987, Given Institute of Pathobiology, Aspen, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

THIRTEENTH ANNUAL PRIMARY CARE ORTHOPEDICS — August 6-11, 1987, Given Institute of Pathobiology, Aspen, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

PERINATAL MEDICINE CONFERENCE — August 7-10, 1987, Snowmass Conference Center, Snowmass Village, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

ASPEN BASIC SCIENCE: RECEPTORS AND DISEASE — August 12-15, 1987. Given Institute of Pathobiology, Aspen, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

RENAL DISEASE FOR THE INTERNIST AND NEPHROLOGIST — August 17-21, 1987, Given Institute of Pathobiology, Aspen, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

FIFTH ANNUAL INTERNAL MEDICINE BOARD REVIEW — August 24-28, 1987, Denver, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

FAMILY PRACTICE REVIEW — October 5-10, 1987, Denver, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

AMERICAN FRIENDS OF THE HEBREW UNIVERSITY

HEBREW UNIVERSITY TO OFFER SUMMER MEDICAL COURSES — Jerusalem, July 5 to July 28, 1987. For the first time

ever, the Hebrew University of Jerusalem will offer summer courses this year taught in English for physicians and medical students from overseas. Two courses are being offered — one in ethical and legal problems in modern medicine from a Jewish perspective and the other in medical problems specific to the Jewish people. The courses are offered by the Hebrew University-Hadassah Medical School in conjunction with the University's Rothberg School for Overseas Students. The courses will be Overseas Students. Deadline for application is May 15, 1987. For an application and further information, contact the Office of Academic Affairs of the Rothberg School for Overseas Students at 11 East 69th Street, New York, NY 10021, telephone (212) 472-2288.

UNIVERSITY OF KANSAS

For information concerning the following continuing education offerings sponsored by the University of Kansas Medical Center contact: Carole Rosen, Promotions Coordinator, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Boulevard, Kansas City, KS 66103 (913) 588-4480.

INTEROPERATIVE RADIATION: A NEW COMBINED TREATMENT APPROACH TO CANCER — July 18, 1987. Sponsored and held at by the University of Kansas Medical Center, Kansas City, Kansas. Credit: AMA, AAFP, CNE. Contact: Eileen Buttron, University of Kansas Medical Center Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103 (913) 588-4480

NUTRITION CONCERNS FOR WOMEN: A SYMPOSIUM FOR HEALTH PROFESSIONALS — September 25, 1987. Sponsored by the University of Kansas Medical Center, Kansas City, Kansas. Credit: AMA, AAFP, CNE, ADA. Contact: Eileen Buttron, University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103, (913) 588-4480.

ALLERGY, IMMUNOLOGY AND RHEUMATOLOGY: REVIEW AND UPDATE — October 9-10, 1987 at the University of Kansas Medical Center. Sponsored by the University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103. Credit: Category I AMA, AAFP. Contact: Eileen Buttron, University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103, (913) 588-4480.

MEDICINE AND RELIGION: ISSUES IN THE EIGHTIES — October 20-21, 1987 to be held at Kansas City, Kansas. Sponsored by University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103. Credit: AMA, AAFP, CNE, SW, Clergy. Contact: Eileen Buttron, University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103, (913) 588-4480.

AMA News Notes

(Continued from page 14-A)

practice, drafting testimony to be delivered before congressional committees, and assisting in the development of AMA policy.

Blehart, who has been with the AMA for eight years, takes over from previous director, Ross N. Rubin, who now assumes full-time duties as assistant division director to Peterson. Blehart was counsel to the American Assn. of Nurse Anesthetists before coming to AMA.

* * *

The issue of campaign finance reform is gaining momentum in the U.S. Senate, according to AMA lobbyists. With the backing of several powerful senators, including Majority Leader Robert Byrd (D., W.Va.), it appears that a bill might come out of committee and to the floor for a vote by mid-May. While a number of approaches are under discussion, the primary thrust of all is on public financing, restrictions on contributions from political action committees, and limits on independent expenditures. AMPAC, along with a wide coalition of other PACs, is voicing concern to legislators and is trying to muster grass-roots support against such legislation.

* * *

Harry S. Jonas, M.D., will assume the directorship of the AMA's Division of Undergraduate Medical Education this July. Dr. Jonas, a nationally recognized expert in medical education, is currently dean of the School of Medicine at the U. of Missouri in Kansas City. He is also president of the American College of Obstetricians and Gynecologists.

In announcing the appointment, Carlos J.M. Martini, M.D., AMA vice president in charge of medical education, said, "Dr. Jonas has the dual qualification of being an academician and being a leader in the specialty societies, which makes him very valuable to us . . . He will be the leading individual in the AMA on graduate medical education. He will be responsible for all of AMA's contributions to the Liaison Committee on Graduate Medical Education (LCGME)."

Dr. Jonas received his medical education from Washington U., in St. Louis, and also did his residency in obstetrics and gynecology in St. Louis. He is a diplomate of the American Board of Obstetricians and Gynecologists. He has served on and headed numerous boards and commissions in his specialty and in the area of medical education.

Picture Gallery

NEBRASKA MEDICAL ASSOCIATION

1987
Annual Session



Dr. Stanley M. Truhlsen presiding at the Board of Councilors meeting.



1987 NMA Honors Luncheon



Dr. Alvin A. Armstrong, Speaker, presiding over the House of Delegates.



Dr. L. Dwight Cherry presenting 50-year certificate to Dr. Alister I. Finlayson.



Dr. L. Dwight Cherry presenting 50-year certificate to Dr. Maurice D. Frazer.



Dr. L. Dwight Cherry presenting 50-year certificate to Dr. Joseph A. Longo, Sr.



Dr. L. Dwight Cherry presenting 50-year certificate to Dr. Paul D. Marx.



Dr. L. Dwight Cherry presenting 50-year certificate to Dr. Harold J. Panzer.



Dr. William Rossing, President, South Dakota State Medical Association speaking to the House of Delegates.



Dr. Francis D. Donahue presenting the Necrology.



Dr. James H. Dunlap makes a special presentation to former Executive Director, Kenneth Neff, during the House of Delegates.



Dr. Gregg Wright addressing the House of Delegates.



Dr. Eugene Ogrod making a presentation to an NMA general session.



Dr. Robert H. Waldman, Dean, University of Nebraska College of Medicine addressing the House of Delegates.



Attorney Steven Hirshtick making a presentation to a NMA general session.



Reference Committee #1 in session.



Reference Committee #5 in session.



Reference Committee #2 in session.



Reference Committee #6 in session.



Reference Committee #3 in session.



Dr. Herbert Reese addresses Reference Committee #1.



Reference Committee #4 in session.



1987 NMA Inaugural Banquet



Dr. Charles Barton presiding at the Inaugural Banquet.



Dr. Hiram Walker presenting "It's Only a Pumpkin" plaque to L. Dwight Cherry.



Dr. Hiram Walker presenting president's badge to Dr. L. Dwight Cherry.



Dr. L. Dwight Cherry presenting plaque to Dr. Hiram Walker.



Dr. Hiram Walker presenting president's medalion to Dr. L. Dwight Cherry.



1987-1988 NMA President Dr. L. Dwight Cherry addressing the Inaugural Banquet.



Dr. Hiram Walker presenting gavel to Dr. L. Dwight Cherry.



Guest speaker Robert McCoy discusses the phrenology machine at the Inaugural Banquet.



"Living in the city
is lonely enough...
with herpes it's like
solitary confinement."

ZOVIRAX[®] (acyclovir) CAPSULES

**Prevent genital herpes
recurrences
month after month with
daily therapy.**

(In controlled studies, recurrences were
totally prevented for 4 to 6 months in up to
75% of patients.)

*Please see last page of this advertisement for
brief summary of prescribing information.*

ZOVIRAX[®] (acyclovir) CAPSULES

**Help free your
patients from
recurrences.**

Daily therapy

Coping with genital herpes is rarely easy. For some, the worst part is the pain and discomfort of frequent attacks — month after month, year after year. For others, the emotional burden presents a more difficult problem, leading to social isolation, anxiety, and diminished self-esteem.

Prevent or reduce recurrences

Although your patients have to live with herpes, they shouldn't have to suffer. Daily therapy with ZOVIRAX CAPSULES can help free them from the cycle of recurrent genital herpes. For many, one capsule three times a day can suppress recurrences completely while on therapy.

Generally well tolerated

Daily therapy with ZOVIRAX CAPSULES is generally well tolerated. The most frequent adverse reactions reported during clinical trials were headache, diarrhea, nausea, vomiting, vertigo, and arthralgia.

The physical and emotional difficulties posed by genital herpes are unique for each patient. The frequency and severity of recurrent episodes, as well as the emotional impact of the disease, should be considered when selecting daily therapy with ZOVIRAX CAPSULES.

*Please see brief summary of
prescribing information on next page*



Prevent recurrences month after month* **ZOVIRAX®** (acyclovir) **CAPSULES**

Brief Summary

INDICATIONS AND USAGE: Zovirax Capsules are indicated for the treatment of initial episodes and the management of recurrent episodes of genital herpes in certain patients.

The severity of disease is variable depending upon the immune status of the patient, the frequency and duration of episodes, and the degree of cutaneous or systemic involvement. These factors should determine patient management, which may include symptomatic support and counseling only, or the institution of specific therapy. The physical, emotional and psychosocial difficulties posed by herpes infections as well as the degree of debilitation, particularly in immunocompromised patients, are unique for each patient, and the physician should determine therapeutic alternatives based on his or her understanding of the individual patient's needs. Thus Zovirax Capsules are not appropriate in treating all genital herpes infections. The following guidelines may be useful in weighing the benefit/risk considerations in specific disease categories:

First Episodes (primary and nonprimary infections — commonly known as initial genital herpes):

Double-blind, placebo-controlled studies have demonstrated that orally administered Zovirax significantly reduced the duration of acute infection (detection of virus in lesions by tissue culture) and lesion healing. The duration of pain and new lesion formation was decreased in some patient groups. The promptness of initiation of therapy and/or the patient's prior exposure to Herpes simplex virus may influence the degree of benefit from therapy. Patients with mild disease may derive less benefit than those with more severe episodes. In patients with extremely severe episodes, in which prostration, central nervous system involvement, urinary retention or inability to take oral medication require hospitalization and more aggressive management, therapy may be best initiated with intravenous Zovirax.

Recurrent Episodes:

Double-blind, placebo-controlled studies in patients with frequent recurrences (6 or more episodes per year) have shown that Zovirax Capsules given for 4 to 6 months prevented or reduced the frequency and/or severity of recurrences in greater than 95% of patients. Clinical recurrences were prevented in 40 to 75% of patients. Some patients experienced increased severity of the first episode following cessation of therapy; the severity of subsequent episodes and the effect on the natural history of the disease are still under study.

The safety and efficacy of orally administered acyclovir in the suppression of frequent episodes of genital herpes have been established only for up to 6 months. Chronic suppressive therapy is most appropriate when, in the judgement of the physician, the benefits of such a regimen outweigh known or potential adverse effects. In general, Zovirax Capsules should not be used for the suppression of recurrent disease in mildly affected patients. Unanswered questions concerning the human relevance of *in vitro* mutagenicity studies and reproductive toxicity studies in animals given very high doses of acyclovir for short periods (see Carcinogenesis, Mutagenesis, Impairment of Fertility) should be borne in mind when designing long-term management for individual patients. Discussion of these issues with patients will provide them the opportunity to weigh the potential for toxicity against the severity of their disease. Thus, this regimen should be considered only for appropriate patients and only for six months until the results of ongoing studies allow a more precise evaluation of the benefit/risk assessment of prolonged therapy.

Limited studies have shown that there are certain patients for whom intermittent short-term treatment of recurrent episodes is effective. This

approach may be more appropriate than a suppressive regimen in patients with infrequent recurrences.

Immunocompromised patients with recurrent herpes infections can be treated with either intermittent or chronic suppressive therapy. Clinically significant resistance, although rare, is more likely to be seen with prolonged or repeated therapy in severely immunocompromised patients with active lesions.

CONTRAINDICATIONS: Zovirax Capsules are contraindicated for patients who develop hypersensitivity or intolerance to the components of the formulation.

WARNINGS: Zovirax Capsules are intended for oral ingestion only.

PRECAUTIONS: General: Zovirax has caused decreased spermatogenesis at high doses in some animals and mutagenesis in some acute studies at high concentrations of drug (see PRECAUTIONS — Carcinogenesis, Mutagenesis, Impairment of Fertility). The recommended dosage and length of treatment should not be exceeded (see DOSAGE AND ADMINISTRATION).

Exposure of Herpes simplex isolates to acyclovir *in vitro* can lead to the emergence of less sensitive viruses. The possibility of the appearance of less sensitive viruses in man must be borne in mind when treating patients. The relationship between the *in vitro* sensitivity of Herpes simplex virus to acyclovir and clinical response to therapy has yet to be established.

Because of the possibility that less sensitive virus may be selected in patients who are receiving acyclovir, all patients should be advised to take particular care to avoid potential transmission of virus if active lesions are present while they are on therapy. In severely immunocompromised patients, the physician should be aware that prolonged or repeated courses of acyclovir may result in selection of resistant viruses which may not fully respond to continued acyclovir therapy.

Drug Interactions: Co-administration of probenecid with intravenous acyclovir has been shown to increase the mean half-life and the area under the concentration-time curve. Urinary excretion and renal clearance were correspondingly reduced.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Acyclovir was tested in lifetime bioassays in rats and mice at single daily doses of 50, 150 and 450 mg/kg given by gavage. There was no statistically significant difference in the incidence of tumors between treated and control animals, nor did acyclovir shorten the latency of tumors. In 2 *in vitro* cell transformation assays, used to provide preliminary assessment of potential oncogenicity in advance of these more definitive life-time bioassays in rodents, conflicting results were obtained. Acyclovir was positive at the highest dose used in one system and the resulting morphologically transformed cells formed tumors when inoculated into immunosuppressed, syngeneic, weanling mice. Acyclovir was negative in another transformation system considered less sensitive.

In acute studies, there was an increase, not statistically significant, in the incidence of chromosomal damage at maximum tolerated parenteral doses of 100 mg/kg acyclovir in rats but not Chinese hamsters; higher doses of 500 and 1000 mg/kg were clastogenic in Chinese hamsters. In addition, no activity was found after 5 days dosing in a dominant lethal study in mice. In 6 of 11 microbial and mammalian cell assays, no evidence of mutagenicity was observed. At 3 loci in a Chinese hamster ovary cell line, the results were inconclusive. In 2 mammalian cell assays (human lymphocytes and L5178Y mouse lymphoma cells *in vitro*), positive responses for mutagenicity and chromosomal damage occurred, but only at concentrations at least 400 times the acyclovir plasma levels achieved in man.

Acyclovir has not been shown to impair fertility or reproduction in mice (450 mg/kg/day, p.o.) or in rats (25 mg/kg/day, s.c.). At 50 mg/kg/day s.c. in the rat, there was a statistically significant increase in post-implantation loss, but no concomitant decrease in litter size. In female rabbits treated subcutaneously with acyclovir subsequent to mating, there was a statistically significant decrease in implantation efficiency but no concomitant decrease in litter size at a dose of 50 mg/kg/day. No effect upon implantation efficiency was observed when the same dose was administered intravenously. In a rat peri- and postnatal study at 50 mg/kg/day s.c., there was a statistically significant decrease in the group mean numbers of corpora lutea, total implantation sites and live fetuses in the F₁ generation. Although not statistically significant,

there was also a dose related decrease in group mean numbers of live fetuses and implantation sites at 12.5 mg/kg/day and 25 mg/kg/day, s.c. The intravenous administration of 100 mg/kg/day, a dose known to cause obstructive nephropathy in rabbits, caused a significant increase in fetal resorptions and a corresponding decrease in litter size. However, at a maximum tolerated intravenous dose of 50 mg/kg/day in rabbits, there were no drug-related reproductive effects.

Intraperitoneal doses of 320 or 80 mg/kg/day acyclovir given to rats for 1 and 6 months, respectively, caused testicular atrophy. Testicular atrophy was persistent through the 4-week post-dose recovery phase after 320 mg/kg/day; some evidence of recovery of sperm production was evident 30 days postdose. Intravenous doses of 100 and 200 mg/kg/day acyclovir given to dogs for 31 days caused aspermatogenesis. Testicles were normal in dogs given 50 mg/kg/day, i.v. for one month.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Acyclovir was not teratogenic in the mouse (450 mg/kg/day, p.o.), rat (50 mg/kg/day, s.c.) or rabbit (50 mg/kg/day, s.c. and i.v.). There are no adequate and well-controlled studies in pregnant women. Acyclovir should not be used during pregnancy unless the potential benefit justifies the potential risk to the fetus. Although acyclovir was not teratogenic in animal studies, the drug's potential for causing chromosome breaks at high concentration should be taken into consideration in making this determination.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Zovirax is administered to a nursing woman. In nursing mothers, consideration should be given to not using acyclovir treatment or discontinuing breastfeeding.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS — Short-Term Administration: The most frequent adverse reactions reported during clinical trials were nausea and/or vomiting in 8 of 298 patient treatments (2.7%) and headache in 2 of 298 (0.6%). Less frequent adverse reactions, each of which occurred in 1 of 298 patient treatments (0.3%), included diarrhea, dizziness, anorexia, fatigue, edema, skin rash, leg pain, inguinal adenopathy, medication taste and sore throat.

Long-Term Administration: The most frequent adverse reactions reported in studies of daily therapy for 3 to 6 months were headache in 33 of 251 patients (13.1%), diarrhea in 22 of 251 (8.8%), nausea and/or vomiting in 20 of 251 (8.0%), vertigo in 9 of 251 (3.6%), and arthralgia in 9 of 251 (3.6%). Less frequent adverse reactions, each of which occurred in less than 3% of the 251 patients (see number of patients in parentheses), included skin rash (7), insomnia (4), fatigue (7), fever (4), palpitations (1), sore throat (2), superficial thrombophlebitis (1), muscle cramps (2), paronychia (1), menstrual abnormality (4), acne (3), lymphadenopathy (2), irritability (1), accelerated hair loss (1), and depression (1).

DOSAGE AND ADMINISTRATION: Treatment of initial genital herpes: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 10 days (total 50 capsules).

Chronic suppressive therapy for recurrent disease: One 200 mg capsule 3 times daily for up to 6 months. Some patients may require more drug, up to one 200 mg capsule 5 times daily for up to 6 months.

Intermittent Therapy: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 5 days (total 25 capsules). Therapy should be initiated at the earliest sign or symptom (prodrome) of recurrence.

Patients With Acute or Chronic Renal Impairment: One 200 mg capsule every 12 hours is recommended for patients with creatinine clearance ≤ 10 ml/min/1.73 m².

HOW SUPPLIED: Zovirax Capsules (blue, opaque) containing 200 mg acyclovir and printed with "Wellcome ZOVIRAX 200". Bottles of 100 (NDC-0081-0991-55) and unit dose pack of 100 (NDC-0081-0991-56).

Store at 15°-30°C (59°-86°F) and protect from light.

*In controlled studies, recurrences were totally prevented for 4 to 6 months in up to 75% of patients.



Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

© 1986 Burroughs Wellcome Co. All rights reserved. 86-ZOV-5

ORGANIZATIONS, STATE

- American Cancer Society, Nebraska Division, Inc.**
Don W. McClure, Exec. Vice President
8502 West Center Rd., P.O. Box 241255, Omaha 68124-5255
- American Diabetes Association — Nebraska Affiliate, Inc.**
Ron Van Ryswyk, Executive Director
7377 Pacific St., Ste. 216A, Omaha 68114
- American Heart Association, Nebraska Affiliate**
Dennis N. Nissen, Executive Director
3624 Farnam St., Omaha 68131
- American Lung Association of Nebraska**
8901 Indian Hills Dr., Ste. 107, Omaha 68114
- American Red Cross**
P.O. Box 83267
1701 "E" St., Lincoln 68501
- Arthritis Foundation, Nebraska Chapter, Inc.**
Mrs. Ellen Wright, Exec. Director
2229 N. 91st Court, Omaha 68134
- Blue Cross and Blue Shield of Nebraska**
Wm. H. Heavey, President
P.O. Box 3248, Main Station, Omaha 68180
- Creighton University School of Medicine**
Richard O'Brien, M.D., Dean
California at 24th St., Omaha 68178
- Cystic Fibrosis Foundation, Nebraska Chapter**
Charles R. Bercaw, Exec. Director
5017 Leavenworth St., Omaha 68106
- Dairy Council of Central States, Inc.**
Suite 103, Hillcrest Bldg.
76th & Main, Ralston 68127
- Division of Rehabilitation Services**
Nebraska Department of Education
6th Floor, 301 Centennial Mall South, Lincoln 68509
- Division of Rehabilitation Services for the Visually Impaired**
James S. Nyman, Ph.D., Director
4600 Valley Road, Lincoln 68510
- Easter Seal Society of Nebraska**
Mrs. Letitia K. Simmons, Executive Director
3015 North 90th St., #6, Omaha 68134
- Health Manpower Referral Service, State of Nebraska**
3rd Floor, State Office, 301 Centennial Mall South, Lincoln 68509
- Lincoln Council on Alcoholism and Drugs, Inc.**
Room 212, 215 Centennial Mall, Lincoln 68508
- March of Dimes — Birth Defects Foundation**
1614 L Street, Lincoln 68508
- MID-PLAINS POISON CONTROL CENTER**
Childrens Memorial Hospital, 8301 Dodge St., Omaha 68114
(402) 390-5490 or 800-642-9999 (toll free Nebraska)
- Missouri Valley Dermatologic Society**
Richard Q. Crotty, M.D., Secretary
7822 Davenport St., Omaha 68114
- Muscular Dystrophy Association**
1912 No. 90th St., Lower Level, Omaha 68114
- National Kidney Foundation of Nebraska**
Karen Engelsman, Executive Director
2217 No. 91st Plaza, Omaha 68134
(402) 397-9234 — NE toll free 800-642-1255
- National Multiple Sclerosis Society — Nebraska-Iowa Midlands Chapter**
3624 Leavenworth, Omaha 68105
- National Society to Prevent Blindness, Nebraska Affiliate**
120 North 69th St., Suite 203, Omaha 68132-2720
- Nebraska Academy of Ophthalmology**
Mylan VanNewkirk, M.D., President
329 West 40th, Scottsbluff 69361
- Nebraska Academy of Otolaryngology**
Michael Crawford, M.D., President
201 Ridge St., #311, Council Bluffs, IA 51501
- Nebraska Allergy Society**
Linda B. Ford, M.D., President
401 E. Gold Coast Rd., Papillion 68128
- Nebraska Association of Medical Assistants, Inc.**
Marie Madison, President
405 East Stolley Park Rd., Grand Island 68801
- Nebraska Association of Nuclear Physicians, Inc.**
Merton A. Quaife, M.D., President
Dept. of Radiology, UNMC - 42nd & Dewey Ave., Omaha 68105
- Nebraska Association of Pathologists**
Joseph Rapoport, M.D., President
6901 No. 72nd St., Omaha 68122
- Nebraska Chapter — American Academy of Family Physicians**
David H. Filipi, M.D., Secretary-Treasurer
Mrs. Phyllis G. Hansen, Executive Secretary
River City Office Park, #202, 401 N. 117th, Omaha 68154
- Nebraska Chapter — American Academy of Physician Assistants**
Joe E. Jeter, P.A.-C, President
P.O. Box 397, North Bend 68649
- Nebraska Chapter — American Academy of Pediatrics**
H. J. Kuehn, M.D., Chairman
4300 Dodge St., #219, Omaha 68114
- Nebraska Chapter — American College of Emergency Physicians**
Richard L. Keller, M.D., President
9641 No. 29th, Omaha 68112
- Nebraska Chapter — American College of Physicians**
Frederick F. Paustian, M.D., F.A.C.P., Governor
UNMC - 42nd & Dewey Ave., Omaha 68105
- Nebraska Chapter — American College of Surgeons**
Louis J. Gogels, M.D., Past President
2221 South 17th St., Lincoln 68502
- Nebraska Chapter of Myasthenia Gravis Foundation**
John F. Aita, M.D., Medical Advisor
105 So. 49th St., Omaha 68132
- Nebraska Dental Association**
Barry Ross, Executive Director
134 So. 13th St., Suite 1007, Lincoln 68508
- Nebraska Dietetic Association**
Linda O. Young, M.S., R.D., President
University of NE - 214 Ruth, Levertown Hall, Lincoln 68503
- Nebraska Health Care Association**
Sandra H. Hockley, Executive Director
3100 "O" St., Ste. 7, Lincoln 68510
- Nebraska Hospital Association**
Harlan Heald, President
Box 94833, 1335 "L" St., Lincoln 68509
- Nebraska League for Nursing**
Priscilla Allen, R.N., President
Box 126, Daykin 68338
- Nebraska Medical Association**
William L. Schellpeper, Executive Director
1512 First Tier Bank Bldg., Lincoln 68508
- Nebraska Medical Foundation**
William L. Schellpeper, Secretary
1512 First Tier Bank Bldg., Lincoln 68508
- Nebraska Nurses Association**
Mary Ann Sak, Executive Director
Suite 711, Terminal Bldg., Lincoln 68508
- Nebraska Orthopaedic Society**
Ronald Schwab, M.D., Secretary
2300 South 13th St., Lincoln 68502
- Nebraska Perinatal Organization**
Joy Jacobs, R.N., Secretary-Treasurer
St. Elizabeth Community Health Center - Labor & Del. Dpt.,
566 So. 70th St., Lincoln 68510
- Nebraska Pharmacists Association**
Tom R. Dolan, R.P., Executive Director
600 So. 12th, Lincoln 68508
- Nebraska Psychiatric Society, District Branch of the American Psychiatric Association**
John Y. Donaldson, M.D., President
6901 No. 72nd St., Omaha 68122
- Nebraska Public Health Association**
President, N.P.H.A.
P.O. Box 94813, Lincoln 68509
- Nebraska Radiological Society**
Joseph C. Anderson, M.D., President
Dept. of Radiology, UNMC - 42nd & Dewey, Omaha 68105
- Nebraska Rheumatism Association**
Arthur L. Weaver, M.D., President
2121 South 56th St., Lincoln 68506
- Nebraska Section, American College of Obstetricians & Gynecologists**
Larry E. Roffman, M.D.
800 Doctors Bldg., Omaha 68131
- Nebraska Society of Anesthesiologists**
K. Reed Peters, M.D., President
1512 First Tier Bank Bldg., Lincoln 68508
- Nebraska Society of Internal Medicine**
Vernon Garwood, M.D., President
120 Wedgewood Drive, Suite A, Lincoln 68510
- Nebraska Society for Respiratory Therapy**
Lynn Lamprecht, RRT, President
Mem. Hospital of Dodge Co., 450 E. 23rd St.
- Nebraska State Department of Health**
Gregg Wright, M.D., Director of Health
P.O. Box 95007, 301 Centennial Mall South, Lincoln 68509
- Nebraska State Obstetric and Gynecology Society**
Dennis D. Beavers, M.D., Secretary-Treasurer
720 No. 87th St., Omaha 68114
- Nebraska Stroke Foundation**
Karyl Newman, President
P.O. Box 67004, Lincoln 68506
- Nebraska Urological Association**
Charles F. Damico, M.D., F.A.C.S., President
2115 No. Kansas, Hastings 68901
- Nebraska Veterinary Medical Association**
Don Ellerbee, Executive Director
209 West 9th St., Hastings 68901
- Omaha Mid-West Clinical Society**
Ms. Lorraine E. Seibel, Executive Secretary
7363 Pacific St., #205-B, Omaha 68114
- United Cerebral Palsy of Lancaster County, Inc.**
Jane Hoffart, Client Services Rep.
P.O. Box 80103, Lincoln 68501
- University of Nebraska Medical Center**
Charles E. Andrews, M.D., Chancellor
42nd & Dewey Ave., Omaha 68105

Drug/Alcohol/Emotional/Other Health Problems

HELP IS AVAILABLE

FOR YOU

FOR A MEMBER OF YOUR FAMILY
FOR A PROFESSIONAL, FRIEND OR
COLLEAGUE

Call

The Physician's Advocacy Committee
(Nebraska Medical Association)

Strictly Confidential — Professional — Effective

For information call:

402-393-3216

(You do not have to give your name.)

AMA News Notes

In response to inquiries stemming from the "Baby M" court decision on legal issues arising from surrogate mother arrangements, James H. Sammons, M.D., AMA executive vice president, issued the following statement:

"The Baby M case illustrates one of the problems that the AMA Council on Ethical and Judicial Affairs anticipated when it concluded in December, 1983, that what have been described as "surrogate mother" arrangements do not provide a satisfactory reproductive alternative. There are many ethical, social, and morally difficult situations that can be envisioned. Surrogate motherhood presents ethical, legal, psychological, societal, and financial concerns that need to be addressed.

"The Baby M case is a trial court decision, and the final word has not been heard. Societal guidelines should emerge and address the broader issues rather than purely legal ones."

* * *

THE NAVAL RESERVE NEED YOU!

The Naval Reserve is actively seeking Physicians due to the expanded requirements of the military Fleet Hospital Program. All medical specialties are needed, particularly Surgeons and Anesthesiologists.

Alter your Practice routine by serving your country as a Naval Officer.

We offer:

- Flexibility in drill schedule
- 4 days' pay for 2 days' work
- Educational loan repayment program
- Continuing Medical Education (CME)
- The opportunity to travel and do something special
- Contact (913) 764-3664

ADVERTISER'S INDEX

A	
Auto-Med	11
B	
Burroughs Wellcome.....	17, 18, 19
C	
Campbell Laboratories	12
Creighton University Medical Center.....	14
D	
Donley Medical Supply.....	6
F	
Family Practice Recertification.....	14
G	
Glaxo/Roche	7, 8, 9, 10
I	
Info-Builders, Inc.....	12
L	
Eli Lilly & Company	2
M	
Medical Protective Co.....	13
N	
Naval Reserve Readiness Command	21
Norfolk Printing Co., Inc.....	6
R	
Roche Laboratories.....	23, 24
S	
Smith Kline & French Labs	3
U	
U.S. Air Force.....	16
Unisys	15
Upjohn Company	4

Physicians' Classified

EMERGENCY MEDICINE: In Omaha NE — Full and Part-time positions available in an emergency department for qualified physician seeking lucrative employment opportunities. Outstanding remuneration and comprehensive malpractice insurance provided. For further information contact: Deborah Bergun, Staffing Specialist, National Emergency Services, Inc., 255 Executive Dr., Suite 104, Plainview, NY 11803 or call 1-800-645-4848 or 516-349-0100.

RADIOLOGISTS NEEDED: Progressive 5 physician group is seeking two radiologists to join its expanding practice in Upper Midwest. One position will assist the group in providing services to a large hospital and large multi-specialty clinic practice. Experience in all modalities is essential. The second position will provide general radiography, mammography and ultrasound for several small rural hospitals. Both positions offer attractive compensation and benefits along with the opportunity to practice in high-quality medicine. Submit CV and cover letter explaining expectations to Box #027, **Nebraska Medical Journal**, 1512 First Tier Bank Bldg., Lincoln, NE 68508.

FAMILY PRACTICE PHYSICIAN NEEDED: Established need for a family practice physician to join seven man group in beautiful Northwest Iowa. Modern 10,000 sq. ft. clinic building is next door to 72-bed JCAH accredited county hospital. Unusually progressive community of 10,000 has economy far above the state average. Storm Lake offers 3,000 acre lake, 85 acres of park and recreation, and is home to Buena Vista College. One hour from Sioux City, and two hours from Omaha & Des Moines. Generous guarantee with immediate incentive plan, paid malpractice insurance, liberal vacation and seminar time, limited call requirements with seven other physicians and no HMO's in the area. Contact Darrell Pritchard, Manager, Buena Vista Clinic, P.C., 620 Northwestern Drive, Storm Lake, IA 50588. Call collect 712-732-5030.

WANTED: Internist wanted for progressive, affiliated VA Medical Center in Lincoln. Will be working primarily with acute care inpatients. Board certification preferred. Must meet English proficiency requirement. Licensure any state. Salary and bonus pay commensurate with training and experience. Equal Opportunity Employer. Write or call (402) 489-3802, Ext. 220, Chief, Medical Service, VA Medical Center, 600 South 70th, Lincoln, NE 68510.

RURAL PRACTICE AVAILABLE: Three physicians left a four physician unopposed group practice in Valentine, NE this year. Need two F.P. graduates to join group. Cooperative community. Well-staffed and equipped clinic and hospital. Financial arrangements negotiable. Contact S. Senseney, M.D., or J. E. Farner, M.D., 111 E. 3rd St., Valentine, NE 69201. Telephone number (402) 376-3770.

FAMILY PRACTICE AND INTERNAL MEDICINE: Huron Clinic Foundation, Limited is a multispecialty group serving a trade area of approximately 50,000, has a practice situation where several members of the staff are near retirement and a ready practice would be available. A new member can start with NO CASH investment, first year salary guarantee, and receive a large number of benefits including malpractice insurance and a pension plan. The Clinic is located next to a 120 bed JCAH accredited regional hospital with excellent diagnostic and care capabilities. The Clinic is currently pressed for a Board Certified/Board Eligible physician to take over a practice. Call collect (605) 352-8691 or contact any staff member or the clinic manager at the Huron Clinic, P.O. Box 822, Huron, South Dakota 57350.

UROLOGIST: VA Medical Center, Lincoln, Nebraska. Seeking board certified or board eligible urologist for progressive, affiliated 180-bed Medical Center. Center is affiliated with University of Nebraska for urology residency program. Salary and bonus pay commensurate with training and experience. Licensure any state. Must meet English proficiency requirement. Allowable moving expenses payable. Equal Opportunity Employer. Write or call: 402-489-3802, Ext. 229, Chief, Surgical Service, VA Medical Center, 600 South 70th St., Lincoln, NE 68510.

MINNEAPOLIS: Seeks BC/BE associates in adult psychiatry, cardiology, family practice, internal medicine, and obstetrics and gynecology. Practice quality medicine in a prepaid multispecialty setting located in one of America's leading metropolitan areas. Comprehensive benefits, excellent facilities, flexible compensation programs. For further information about joining the GROUP HEALTH medical staff, call Jerry Hess at 612-623-8444 or write to Group Health, Inc., Attention: Jerry Hess, 2829 University Avenue S.E., Minneapolis, MN 55414.

FAMILY PHYSICIAN - UNIQUE PRACTICE OPPORTUNITY: For interested family practitioner to practice with a busy, young, Board Certified and established family practice group. We are a community of 10,000 with a service area of 30,000 F.P.'s work in a full range scope of family practice including obstetrics. Modern, well-equipped clinic and JCAH hospital. Abundant outdoor recreation activities, small community college locally and within one hour flying time to major sport, cultural and urban activities. Enclose C.V. to Donal Morgan, M.D., Southwest Nebraska Medical Center, 1401 East "H", McCook, NE 69001, 308-345-2650.

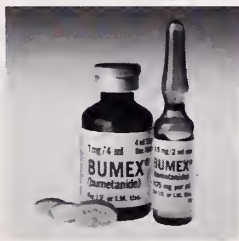
OPPORTUNITY: Outstanding opportunity for board certified (or eligible) ophthalmologist. Guaranteed \$100,000 first year salary plus benefits with opportunity to become partner and within a few years sole owner. Very successful well-balanced practice with considerable surgery. Completely equipped. Laser available. Beautiful new free-standing building close to progressive hospital complex in midwestern city of 75,000, metropolitan area approximately 125,000. Excellent housing, education and cultural opportunities. Write to Box 028, **Nebraska Medical Journal**, 1512 First Tier Bank Bldg., Lincoln, NE 68508.

Bumex[®]

bumetanide/Roche

0.5-mg, 1-mg and 2-mg scored tablets,
2-ml ampuls (0.25 mg/ml) and 2-ml, 4-ml
and 10-ml vials (0.25 mg/ml)

REDUCES FLUID OVERLOAD and eases the burden on the failing heart



BUMEX[®]
bumetanide/Roche
0.5-mg, 1-mg and 2-mg scored tablets,
2-ml ampuls, 2-ml, 4-ml and
10-ml vials (0.25 mg/ml)

BUMEX[®] (bumetanide/Roche)

Before prescribing, please consult complete product information, a summary of which follows:

WARNING: Bumex (bumetanide/Roche) is a potent diuretic which, if given in excessive amounts, can lead to a profound diuresis with water and electrolyte depletion. Therefore, careful medical supervision is required, and dose and dosage schedule have to be adjusted to the individual patient's needs. (See under **DOSAGE AND ADMINISTRATION** in complete product information.)

INDICATIONS AND USAGE: Edema associated with congestive heart failure, hepatic and renal disease, including the nephrotic syndrome. Almost equal diuretic response occurs after oral and parenteral administration of Bumex. If impaired gastrointestinal absorption is suspected or oral administration is not practical, Bumex should be given by the intramuscular or intravenous route. Successful treatment with Bumex following instances of allergic reactions to furosemide suggests a lack of cross-sensitivity.

CONTRAINDICATIONS: Anuria. Hypersensitivity and in patients in hepatic coma or in states of severe electrolyte depletion. Although Bumex can be used to induce diuresis in renal insufficiency, any marked increase in blood urea nitrogen or creatinine, or the development of oliguria during therapy at patients with progressive renal disease, is an indication for discontinuation of treatment.

WARNINGS: Dose should be adjusted to patient's needs. Excessive doses or too frequent administration can lead to profound water loss, electrolyte depletion, dehydration, reduction in blood volume and circulatory collapse with the possibility of vascular thrombosis and embolism, particularly in elderly patients. Prevention of hypokalemia requires particular attention in patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis and ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, certain diarrheal states, or other states where hypokalemia is thought to represent particular added risks to the patients.

In patients with hepatic cirrhosis and ascites, sudden alterations at electrolyte balance may precipitate hepatic encephalopathy and coma. Treatment in such patients is best initiated in the hospital with small doses and careful monitoring of the patient's clinical status and electrolyte balance. Supplemental potassium and/or spironolactone may prevent hypokalemia and metabolic alkalosis in these patients.

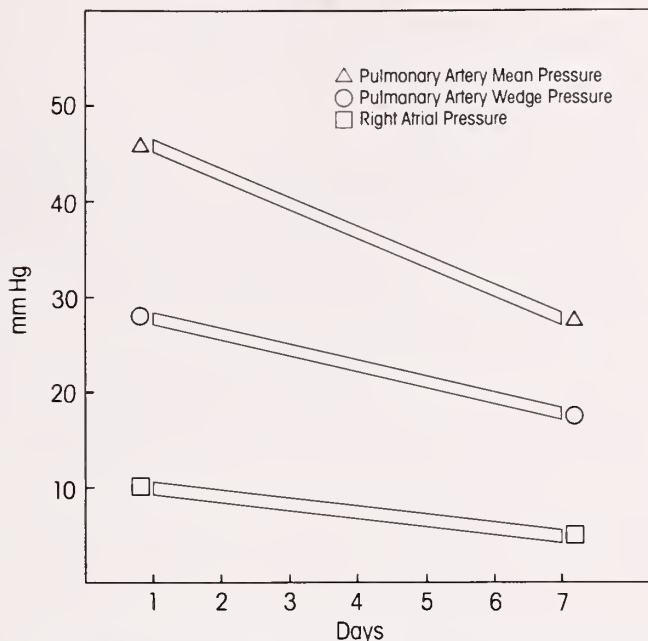
In cats, dogs and guinea pigs, Bumex has been shown to produce ototoxicity. Since Bumex is about 40 to 60 times as potent as furosemide, it is anticipated that blood levels necessary to produce ototoxicity will rarely be achieved. The potential for ototoxicity increases with intravenous therapy, especially at high doses.

Patients allergic to sulfonamides may show hypersensitivity to Bumex.

PRECAUTIONS: Measure serum potassium periodically and add potassium supplements or potassium-sparing diuretics, if necessary. Periodic determinations of other electrolytes are advised in patients treated with high doses or for prolonged periods, particularly in those on low salt diets. Hyperkalemia may occur. Reversible elevations of the BUN and creatinine may occur, especially with dehydration and in patients with renal insufficiency. Bumex may increase urinary calcium excretion.

Possibility of effect on glucose metabolism exists. Periodic determinations of blood sugar should be done, particularly in patients with diabetes or suspected latent diabetes.

Significantly improves hemodynamics



Ten patients with CHF showed marked hemodynamic improvement after seven days of BUMEX[®] (bumetanide/Roche) (mean values $\pm$ SE). Adopted from Olesen, *et al*.¹

References: 1. Olesen KH, *et al. Postgrad Med J* 51(Suppl 6): 54-63, 1975. 2. Hordler B, Dhingra RC, Rosen KM. *J Clin Pharmacol* 21: 706-711, Nov-Dec 1981. 3. Brater DC, *et al. Clin Pharmacol Ther* 34: 207-213, Aug 1983. 4. Brater DC, Fax WR, Chennovasin P. *J Clin Pharmacol* 21: 599-603, Nov-Dec 1981. 5. Davies DL, *et al. Clin Pharmacol Ther* 15: 141-155, Feb 1974.

Patients should be observed regularly for possible occurrence of blood dyscrasias, liver damage or idiosyncratic reactions.

Especially in presence of impaired renal function, use of parenterally administered Bumex should be avoided in patients to whom aminoglycoside antibiotics are also being given, except in life-threatening conditions.

Drugs with nephrotoxic potential and bumetanide should not be administered simultaneously. Since lithium reduces renal clearance and adds a high risk of lithium toxicity, it should not be given with diuretics.

Probenecid should not be administered concurrently with Bumex.

Concurrent therapy with indomethacin not recommended.

Bumex may potentiate the effects of antihypertensive drugs, necessitating reduction in dosage. Interaction studies in humans have shown no effect on digoxin blood levels.

Interaction studies in humans have shown Bumex to have no effect on warfarin metabolism or on plasma prothrombin activity.

Pregnancy: Bumex should be given to a pregnant woman only if the potential benefit justifies the potential risk to the fetus.

Bumetanide may be excreted in breast milk.

Pediatric Use: Safety and effectiveness below age 18 not established.

ADVERSE REACTIONS: Muscle cramps, dizziness, hypotension, headache and nausea, and encephalopathy (in patients with preexisting liver disease).

Less frequent clinical adverse reactions are weakness, impaired hearing, rash, pruritus, hives, electrocardiogram changes, abdominal pain, arthritic pain, musculoskeletal pain and vomiting. Other clinical adverse reactions are vertigo, chest pain, ear discomfort, fatigue, dehydration, sweating, hyperventilation, dry mouth, upset stomach, renal failure, asterixis, itching, nipple tenderness, diarrhea, premature ejaculation and difficulty maintaining an erection.

Laboratory abnormalities reported are hyperuricemia, azotemia, hyperglycemia, increased serum creatinine, hypochloremia, hypokalemia, hyponatremia, and variations in CO₂ content, bicarbonate, phosphorus and calcium. Although manifestations at the pharmacologic action of Bumex, these conditions may become more pronounced by intensive therapy.

Diuresis induced by Bumex may also rarely be accompanied by changes in LDH, total serum bilirubin, serum proteins, SGOT, SGPT, alkaline phosphatase, cholesterol, creatinine clearance, deviations in hemoglobin, prothrombin time, hematocrit, platelet counts and differential counts. Increases in urinary glucose and urinary protein have also been seen.

DOSAGE AND ADMINISTRATION:

Oral Administration: The usual total daily dosage is 0.5 to 2.0 mg and in most patients is given as a single dose.

Parenteral Administration: Administer to patients (IV or IM) with GI absorption problem or who cannot take oral. The usual initial dose is 0.5 to 1 mg given over 1 to 2 minutes. If insufficient response, a second or third dose may be given at 2 to 3 hour intervals up to a maximum of 10 mg a day.

HOW SUPPLIED: Tablets: 0.5 mg (light green), 1 mg (yellow) and 2 mg (peach), bottles of 100 and 500, Prescription Paks of 30. Tel-E-Dose[®] cortons of 100. Imprint on tablets: 0.5 mg—ROCHE BUMEX 0.5, 1 mg—ROCHE BUMEX 1, 2 mg—ROCHE BUMEX 2.

Ampuls: 2 ml, 0.25 mg/ml, boxes of ten.

Vials: 2 ml, 4 ml and 10 ml, 0.25 mg/ml, boxes of ten.



ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc
Nutley, New Jersey 07110

LIBRARY
JUN 04 1987
OF MEDICINE

OVERLOAD

Reduce fluid volume and improve hemodynamics in CHF

Edema due to congestive heart failure often demands highly effective diuresis to reduce the fluid load on the failing heart. Bumex® (bumetanide/Roche) is the next generation in loop diuretic therapy for three powerful reasons. It moves out an unsurpassed volume of fluid and sodium, resulting in significant reductions in edema and right atrial and pulmonary artery wedge pressures.^{1,2} It's almost completely absorbed through the GI tract, so it's easy to

titrate.³ And Bumex completes high-volume diuresis fast—within four hours at usual doses.^{4,5} Your patients spend less time in diuresis, more time in normal activities.

Bumex has a good safety profile; however, as with all loop diuretics, Bumex, if given in excessive amounts, can lead to profound diuresis with water and electrolyte depletion, including hypokalemia. Serum electrolytes should be monitored periodically, especially in patients on low salt diets or those treated for prolonged periods or on high doses.



Bumex® 
bumetanide/Roche

0.5-mg, 1-mg and 2-mg scored tablets, 2-ml ampuls (0.25 mg/ml) and 2-ml, 4-ml and 10-ml vials (0.25 mg/ml)

**First line
loop diuretic therapy**

THE NEBRASKA MEDICAL JOURNAL



119
Years



Contents

Original Articles

- The Incidence of Hospitalizations and
Emergency Room Visits Resulting from
Exposure to Chemicals Used in
Agriculture **215**

Bryan A. Rettig, M.S.
Debbie K. Allen, R.R.A.
Joseph E. Sniezek, M.D.

- Cardiovascular Effects of Tricyclic
Antidepressants and Their Rational
Use in Depressed Cardiac Patients **220**

Arun Sharma, M.D.
James O'Sullivan, M.D.

- A Case Study on the Effects of Strenuous
Exercise on Serum Lithium Levels **224**

Thomas C. Norman, R.N., PA Student
Wayne Mathews, PA-C
Charles D. Yohe, M.D.

Fracture of the Month

- Fracture Dislocation from a "Jammed
Finger" — A Common Problem With
Potential Pitfalls

John F. Connolly, M.D.
Jan Davis, M.D.
Thomas P. Ferlic, M.D.

Perinatal Page

- "Why Blame the Obstetrician?" **229**
J. Patrick Lavery, M.D.

Features

- President's Page **231**
- The Auxiliary **232**
- Medical School News **234**
- Welcome New Members **235**
- Coming Meetings **236**
- In Memoriam **240**
- Proceedings of NMA Annual Session,
April 1987 **272**
- 241**

NY 10029

THE N.Y. ACADEMY OF MED.
LIB-PERIODICALS DEPT.
2 EAST 103RD ST.
NEW YORK



***A book to help
you evaluate the
opportunities...***

PHYSICIAN-HOSPITAL JOINT VENTURES

Cooperative business ventures between physician and hospital—a new strategy for competing in changing times.

How does a joint venture work? What should you consider in evaluating a joint venture proposal? And is this a strategy for you? *Physician-Hospital Joint Ventures* is a timely guide to help you answer these questions and more.

Developed by the AMA Committee on Medicolegal Problems and the Council on Ethical and Judicial Affairs, *Physician-Hospital Joint Ventures* addresses key concerns of any physician evaluating such an enterprise:

- The new tax code, and other legislative changes since Fall, 1986
- Ethical considerations
- Relevant legal and business topics
- Generic and complex models of joint venture proposals

Plus, a comprehensive bibliography.

Order your copy today.

To order your copy of *Physician-Hospital Joint Ventures*, just call toll-free, **1-800-621-8335**. In Illinois call collect, **312-645-4987**. MasterCard and Visa are accepted. To order by mail, complete and return the attached coupon.

Complete this coupon and mail to:
**American Medical Association
Book & Pamphlet Fulfillment
OP-124 P.O. Box 10946
Chicago, IL 60610-0946**

Name _____

Address _____

City/State/Zip _____

AMA Members: _____ copies
@ \$10.00 ea. \$ _____

Non-members: _____ copies
@ \$12.50 ea. \$ _____

Sales Tax (NY & IL residents only) \$ _____

TOTAL \$ _____

☐ Enclosed is my check payable to the American Medical Association

Credit card order:

☐ MasterCard ☐ Visa

Card # _____

Exp. Date _____ Phone _____

Signature _____

For information on quantity discounts, call the AMA Order Department, 312-280-7168.

Payment must accompany order. Please allow 4-6 weeks for delivery. This completed form must accompany all orders. Prices subject to change without notice.

**Give your angina patients
what they're missing...**



CARDIZEM:[®] FEW SIDE EFFECTS

diltiazem HCl/Marion

- **Antianginal action includes dilatation of coronary arteries, a decrease in vascular resistance/afterload, and a reduction in heart rate**
- **Proven efficacy when used alone in angina¹**
- **Compatible with other antianginals^{2,3*}**
- **A safe choice for angina patients with coexisting hypertension, asthma, COPD, or PVD^{4,5}**

90^{mg} **NEW** **120**^{mg}
GREATER
DOSAGE
FLEXIBILITY

***See Warnings and Precautions.**

Please see brief summary of prescribing information on the next page.



CARDIZEM[®] FEW SIDE EFFECTS diltiazem HCl/Marion IN ANTIANGINAL THERAPY

60 mg tid or qid

Brief Summary Professional Use Information

CARDIZEM[®]
(diltiazem HCl) 30 mg and 60 mg Tablets

CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

- Cardiac Conduction.** CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.
- Congestive Heart Failure.** Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt). Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
- Hypotension.** Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.
- Acute Hepatic Injury.** In rare instances, significant elevations in enzymes such as alkaline phosphatase, CPK, LDH, SGOT, SGPT, and other symptoms consistent with acute hepatic injury have been noted. These reactions have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in most cases, but probable in some. (See PRECAUTIONS.)

PRECAUTIONS

General. CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic

function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes, however, these changes were reversible with continued dosing.

Drug Interaction. Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in *in vitro* bacterial tests. No intrinsic effect on fertility was observed in rats.

Pregnancy. Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably asso-

ciated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%):

Cardiovascular	Angina, arrhythmia, AV block (first degree), AV block (second or third degree — see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope
Nervous System	Amnesia, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor
Gastrointestinal	Anorexia, constipation, diarrhea, dysgeusia, dyspepsia, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase
Dermatologic	Petechiae, pruritus, photosensitivity, urticaria
Other	Amblyopia, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarthral pain, polyuria, sexual difficulties

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.

See complete Professional Use Information before prescribing.

Issued 7/86

References: 1. Pepine CJ, Feldman RL, Hill JA, et al. Clinical outcome after treatment of rest angina with calcium blockers. Comparative experience during the initial year of therapy with diltiazem, nifedipine, and verapamil. *Am Heart J* 1983; 106(6): 1341-1347. 2. Shapiro W. Calcium channel blockers: Actions on the heart and uses in ischemic heart disease. *Consultant* 1984; 24(Dec): 150-159. 3. Johnston DL, Lesoway R, Humen DP, et al. Clinical and hemodynamic evaluation of propranolol in combination with verapamil, nifedipine and diltiazem in exertional angina pectoris. A placebo-controlled, double-blind, randomized, crossover study. *Am J Cardiol* 1985; 55: 680-687. 4. Cohn PF, Braunwald E. Chronic ischemic heart disease. In Braunwald E (ed). *Heart Disease. A Textbook of Cardiovascular Medicine*, ed 2. Philadelphia, WB Saunders Co, 1984, chap 39. 5. Schroeder JS. Calcium and beta blockers in ischemic heart disease: When to use which. *Mod Med* 1982; 50(Sep): 94-116.

Another patient benefit product from

MARION
LABORATORIES, INC.
KANSAS CITY, MO 64137

The Nebraska Medical Journal

VOL. 72, NO. 7

JULY 1987

EDITOR —

ALAN D. FORKER, M.D.
5505 Ellendale Road,
Lincoln, NE 68510

Associate Editors:

Deepak M. Gangahar, M.D., Lincoln
Charles S. Wilson, M.D., Lincoln

Editorial Board:

James O. Armitage, M.D., Omaha
Rodney S.W. Basler, M.D., Lincoln
Jehangir B. Bastani, M.D., Lincoln
John H. Casey, M.D., Lincoln
Paul E. Collicott, M.D., Lincoln
John F. Connolly, M.D., Omaha
Douglass Decker, Jr., M.D., Lincoln
Robert W. Gillespie, M.D., Lincoln
Stephen R. Grenier, M.D., Lincoln
Bruce D. Gutnik, M.D., Omaha
Roger Harned, M.D., Omaha
Edward A. Holyoke, Jr., M.D., Ogallala
Sushil S. Lacy, M.D., Lincoln
Hal K. Mardis, M.D., Omaha
Gilles R. G. Monif, M.D., Omaha
Walter J. O'Donohue, M.D., Omaha
William F. Rayburn, M.D., Omaha
John L. Reed, M.D., Lincoln
Jerald R. Schenken, M.D., Omaha
Kenton L. Shaffer, M.D., Kearney
Harlan C. Shriner, Jr., M.D., Lincoln
Patricia Cole Stivins, M.D., Lincoln
Harold W. Thaut, M.D., Beatrice
Jon S. Thompson, M.D., Omaha
William L. Vosik, M.D., Kearney
Arthur Weaver, M.D., Lincoln



SUBSCRIPTION RATE

\$18.00 Per Year U.S.
\$18.00 Per Year Foreign Country
Single Copies \$1.50 Each

Copyright © 1987 Nebraska Medical Association. Information concerning reprints of the articles in this Journal and concerning obtaining permission for the reproduction of any portion of this Journal may be obtained from the Editor.

The Nebraska Medical Journal does not assume responsibility for statements made or opinions expressed by the authors. Products and services advertised are neither endorsed nor warranted by the Nebraska Medical Association. The Nebraska Medical Journal reserves the right to accept or reject advertising copy.

Published monthly and Second-Class Postage paid at Lincoln, Nebraska and at additional mailing offices (ISSN 0091-6730)

Address all correspondence relating to subscriptions, advertising or address changes to William L. Schellpeper, Business Manager, 1512 First Tier Bank Building, Lincoln, Nebraska 68508. Phone (402) 474-4472.

ORIGINAL ARTICLES —

- The Incidence of Hospitalizations and Emergency Room Visits Results from Exposure to Chemicals Used in Agriculture** 215
Bryan A. Rettig, M.S.
Debbie K. Klein, R.R.A.
Joseph E. Sniezek, M.D.

- Cardiovascular Effects of Tricyclic Antidepressants and Their Rational Use in Depressed Cardiac Patients** 220
Arun Sharma, M.D.
James O'Sullivan, M.D.

- A Case Study on the Effects of Strenuous Exercise on Serum Lithium Levels** 224
Thomas C. Norman, R.N., PA Student
Wayne Mathews, PA-C
Charles D. Yohe, M.D.

FRACTURE OF THE MONTH —

- Fracture Dislocation from a "Jammed Finger" — A Common Problem With Potential Pitfalls** 226
John F. Connolly, M.D.
Jan Davis, M.D.
Thomas P. Ferlic, M.D.

PERINATAL PAGE —

- "Why Blame the Obstetrician?"** 229
J. Patrick Lavery, M.D.

FEATURES —

- President's Page** 231
The Auxiliary 232
Medical School News 234
Welcome New Members 235
Coming Meetings 236
In Memoriam 240
Proceedings of NMA Annual Session, April 1987 241
Picture Gallery 272

Since 1925

Nebraska's Leading Physicians and Surgical Supply House

Phone 474-3222



**DONLEY MEDICAL
SUPPLY COMPANY**

P.O. Box 83108, Lincoln, NE 68501
AUTHORIZED CONTRACT AGENT

REPRINTS

OF YOUR

Technical Articles

Are a direct presentation of research
and a valuable supplement
to any doctor's library.



It costs very little
to run reprints —
write us for prices

Norfolk Printing Co., Inc.

118 North Fifth
NORFOLK, NEBRASKA 68701

Letterheads - Statements
Envelopes - Office Forms
Quality Printing at the Right Price

ADVICE TO AUTHORS

Manuscripts should be submitted in duplicate to the Editor at the following address: Alan D. Forker, M.D., 5505 Ellendale Road, Lincoln, Nebraska 68510. The manuscript should be typewritten, double-spaced, on 8½ x 11 in. paper, with generous margins on each page. Number all pages in the right upper corner with the author's surname.

Review articles will be considered, and should generally be limited to less than 4,000 words and approximately 30 references.

Manuscripts describing original clinical or laboratory research should be limited to 2,000 words and approximately 20 references.

Acknowledgements must be given when material from other publications is included. Provide names of authors, title of article, title of journal or book, volume number, pages, month and year, and publisher's permission to reprint.

Always send a covering letter or letter of transmittal with each manuscript, and refer to the manuscript by its title, in the letter and all correspondence. Do not send a manuscript that was published elsewhere.

Title page: each manuscript should have a title page, including the full name, academic degree, and hospital or university affiliation of each author. A name and address for reprint requests should be included on the title page, including street address, city, state, and zip code.

Summary for article: all major scientific articles should be accompanied by a summary at the end of the article, summarizing the key information and recommendations presented.

References: should be listed in the order in which they appear in the article and should be typed double-spaced. Authors are responsible for the completeness and accuracy of all cited references. Journal references should include authors' names and initials, title of article, abbreviated name of Journal (as listed in Index Medicus), volume number, inclusive pages, and year of publication. References to books should include authors, title, location and name of publisher, year of publication, edition, and page numbers.

Tables and illustrations: should be typed double-spaced on separate sheets of 8½ x 11 in. paper. Each Table should have a title. Illustrations should be prepared professionally and submitted as high-quality, glossy, unmounted black-and-white photographic prints, at least 5 x 7 in. Do not send original artwork. Each illustration should be consecutively numbered and cited in the text. Each photograph should have a gummed label on the back containing the figure number, name of senior author and an arrow indicating top of figure. Legends should be typed double-space for each illustration. Permission to reproduce a picture of a patient is needed, if such a picture is included.

Letters-to-the-Editor: letters are encouraged by all readers and will be published as space permits and at the discretion of the Editor. All letters should be accompanied by the notation: For publication. Galley proofs generally will not be returned to the authors pre-publication.

Manuscripts will be published in the order in which they are received, particularly in the order in which galley proofs are returned from the authors. The Editor of this Journal assumes no responsibility for opinions and claims expressed in an article published in this Journal.

Reprints should be ordered from the printer, Norfolk Printing Company, Inc., P.O. Box 278, Norfolk, Nebraska 68701.

The complete journal for family practice physicians

- Reaches 79,000 family physicians monthly
- Presents the most commonly seen patient problems in family practice
- Written by physicians for physicians
- The most current clinical updates in:
 - Cardiology
 - Ob/Gyn
 - Diabetes
 - Psychiatry
 - Pediatrics
 - Gastroenterology
- Provides 20 hours of CME Category 1 Credit

PRACTICAL • CLINICAL • EDUCATIONAL • CURRENT

MARCH 1987 VOL. 9, NO. 3

FP

family practice

R

Recertification™

● Cl. 10 Genitourinary system
Prostatitis: Diagnosis and Treatment
William R. Scheibel, MD

● Cl. 20 Problems other than specific diagnostic/symptomatic
Automobile Safety
N. Burton Atico, MD • Richard J. Smith, III • Michael A. Friedman

▲ Cl. 1 Communicable diseases
Acquired Immunodeficiency Syndrome, Part 2: The Spectrum of Disease
Nevin M. Amin, MD

◆ Cl. 7 Circulatory system
Antianginal Drug Therapy for Stable Angina Pectoris: Update
Wilbert S. Aronow, MD



page 84

EXTENSIVE CHORIORETINITIS CAUSED BY TOXOPLASMOSIS ASSOCIATED WITH AIDS INFECTION

COUNCILOR DISTRICTS AND COUNTIES

First District: Councilor: Richard B. Svehla, Omaha. Counties: Douglas, Sarpy.

Second District: Councilor: Sushil S. Lacy, Lincoln. Counties: Cass, Lancaster, Otoe.

Third District: Councilor: C. T. Frerichs, Beatrice. Counties: Gage, Johnson, Nemaha, Pawnee, Richardson.

Fourth District: Councilor: Roger Massie, Plainview. Counties: Antelope, Cedar, Cuming, Dakota, Dixon, Knox, Madison, Pierce, Stanton, Thurston, Wayne.

Fifth District: Councilor: William Chleborad, M.D., Fremont. Counties: Boone, Burt, Colfax, Dodge, Merrick, Nance, Platte, Washington.

Sixth District: Councilor: Robert Herpolzheimer, M.D., Seward. Counties: Butler, Hamilton, Polk, Saunders, Seward, York.

Seventh District: Councilor: Robert Quick, M.D., Crete. Counties: Clay, Fillmore, Jefferson, Nuckolls, Saline, Thayer.

Eighth District: Councilor: Floyd H. Shiffermiller, Ainsworth. Counties: Boyd, Brown, Cherry, Holt, Keya Paha, Rock, Sheridan.

Ninth District: Councilor: Stanley Nabity, Grand Island. Counties: Blaine, Buffalo, Custer, Dawson, Garfield, Grant, Greeley, Hall, Hooker, Howard, Loup, Sherman, Thomas, Valley, Wheeler.

Tenth District: Councilor: David R. Little, M.D., Hastings. Counties: Adams, Chase, Dundy, Franklin, Frontier, Furnas, Gosper, Harlan, Hayes, Hitchcock, Kearney, Phelps, Red Willow, Webster.

Eleventh District: Councilor: Donald E. Fischer, North Platte. Counties: Arthur, Deuel, Garden, Keith, Lincoln, Logan, McPherson, Perkins.

Twelfth District: Councilor: Donald E. Wilkinson, Alliance. Counties: Banner, Box Butte, Cheyenne, Dawes, Kimball, Morrill, Scotts Bluff, Sioux.

NEBRASKA MEDICAL ASSOCIATION Councilor Districts and Component County Medical Societies COMPONENT COUNTY MEDICAL SOCIETIES

COUNTY	PRESIDENT	SECRETARY-TREASURER
Adams	Kevin Wycoff, Hastings	Richard French, Hastings
Antelope-Pierce	Kenneth Peters, Plainview	David Johnson, Osmond
Box Butte	Wendell Fairbanks, Alliance	Chris Wilkinson, Alliance
Buffalo	John Schulte, Kearney	Gerry Jensen, Kearney
Butler	Victor Thoendel, David City	Jack Kaufmann, David City
Cass	R. R. Anderson, Nehawka	Glen K. Knosp, Elmwood
Cheyenne-Kimball-Deuel	James Thayer, Sidney	Clinton Dorwart, Sidney
Cuming		Gordon Moshman, West Point
Custer	Loren Jacobsen, Broken Bow	N. Leon Books, Broken Bow
Dawson		Rodney Sitorius, Cozad
Dodge	Rod Koerber, Fremont	W. B. Eaton, Fremont
Five	Willis L. Wiseman, Wayne	Robert Benthack, Wayne
Four	Tom Martin, Ord	Otis Miller, Ord
Gage	Alan Langvardt, Beatrice	Louis J. Gogela, Jr., Beatrice
Hall	L. W. Hake, Grand Island	Gordon Francis, Grand Island
Hamilton	M. D. Jobman, Aurora	G. D. Penner, Aurora
Holt & Northwest	Melvin Campbell, Ainsworth	John Bryd, Valentine
Jefferson	Gordon O. Johnson, Fairbury	R. A. Blatny, Fairbury
Knox	D. M. Laflan, Creighton	D. J. Nazegast, Bloomfield
Lancaster	C. L. Barton, Lincoln	M. A. Breiner, Lincoln
Lincoln	Dell Shepherd, North Platte	Timothy O'Holleran, North Platte
Madison	G. Tom Surber, Norfolk	C. Robert Adams, Norfolk
Metropolitan Omaha	Jerald R. Schenken, Omaha	F. F. Paustian, Omaha
Northeast	G. Tom Surber, Norfolk	C. Robert Adams, Norfolk
Northwest	Joel Hutchens, Gordon	R. H. Rasmussen, Chadron
Otoe	Dean R. Thomson, Nebraska City	Paul R. Madison, Nebraska City
Keith-Perkins-Chase	Berl W. Spencer, Ogallala	E. A. Holyoke, Ogallala
Platte-Loup Valley	Arthur Liebenritt, Columbus	Dwight Rickard, Columbus
Saline		Robert E. Tuma, Crete
Sarpy	Fred Gawewski, Papillion	Fred Schwartz, Papillion
Saunders	I. M. French, Wahoo	John E. Hansen, Jr., Wahoo
Scotts Bluff	Lowell Stratton, Mitchell	Vonn Roberts, Scottsbluff
Seward	Paul Plessman, Seward	Van Vahle, Seward
South Central	Jeff Hollins, Geneva	Chas. F. Ashby, Geneva
Southeast Nebr.	Gary Enszt, Auburn	George Voigtlander, Pawnee City
Southwest Nebr.	David A. Allerheiligen, McCook	E. C. Beyer, McCook
Washington-Burt	H. Neal Sievers, Blair	K. C. Bagby, Blair
York	James D. Bell, York	Darroll J. Loschen, York

PHYSICIANS

Primary Care Clinic

Omaha, Nebraska

Physicians/Family practice or primary care specialty. BC or BE. A competitive salary/benefit program is offered in addition to professional development funding and malpractice insurance. For confidential consideration, please send Curriculum Vitae to: **Susan Bray, JSA/Republic, Health Management and Consultant, Box 1305, Columbia, MD 21044; or contact her at:**

301-964-2811



Physicians who have thoroughly investigated their choices are selecting MDX* medical data software.

MDX

*MDX is a trademark of Calyx, Inc.

Call us about the multi-user, multi-tasking MDX system. We will send you a video tape presentation.



INFO-BUILDERS, INC.

402/331-2546
11203 JOHN GALT BOULEVARD
OMAHA, NEBRASKA 68137

Providing complete installation, training and support services.

AMA News Notes

The 18-member Health Policy Agenda Implementation Committee has targeted five specific areas as initial-implementation priorities. These are:

— Development of a basic health care benefits package: An ad hoc committee chaired by former Utah Gov. Scott Matheson, a member of the HPA Steering Committee, and including representatives from provider, consumer, business, insurance and labor organizations will address the essential elements that should be contained in any acceptable comprehensive package of benefits.

— Medicaid reform: The HPA report recommends major reform of the Medicaid program. Jim Tallon, a state representative from New York, will likely chair the ad hoc committee which will develop the parameters for a legislative package to spur this reform.

— Consumer information: HPA has appointed a program planning committee that will develop a fall, 1988 conference focused on development of appropriate consumer health information. Coordinated dissemination of this information will guide the public toward making informed health care decisions.

— Biomedical research funding: Following up on its recommendation urging increased support for biomedical research, the HPA already has submitted statements to the 100th Congress stressing the need for increased levels of federal support.

— Patient compensation fund demonstration program. The HPA called for a demonstration study of a patient compensation fund to replace the tort system in determining compensation for injuries. The MICHIGAN STATE MEDICAL SOCIETY has volunteered to pursue the development of this alternative method. HPA staff and consultants already are working with MSMS staff and the physician leadership on this project.

* * *

Two out of every three physicians and half of the adult public surveyed by the AMA believe that 15-17-year-olds should be per-

(continued on page 17-A)

To show you how many
hypertensives stayed on

INDERAL[®] LA
(PROPRANOLOL HCl)

after a major nationwide trial...



...we had
to find
just the
right room.



60,073 patients (90%) who started on INDERAL LA stayed on INDERAL LA.^{1*}

Surprising? Not really.

Because most patients on INDERAL LA (propranolol HCl) don't even know it's working.

A recent double-blind, placebo-controlled, crossover study in 138 hypertensive patients² revealed that INDERAL LA has a side effects profile unsurpassed by atenolol or metoprolol — which shows how well-tolerated once-daily INDERAL LA can be.

Sole therapy or concomitant therapy?

Fifty-nine percent of the time, INDERAL LA stood on its own.

The patients in the nationwide compliance trial were no different from yours. Generally when the antihypertensive regimen is complicated, compliance may become a problem. So, the effectiveness of INDERAL LA as once-daily monotherapy is a big plus. Of the remaining hypertensives in the program, 36% were treated merely with the addition of a diuretic to INDERAL LA.

For the noncompliant patients in your practice, INDERAL LA may well be the answer.

Almost 20,000 of the patients in the nationwide compliance trial were identified as having been noncompliant with their previous antihypertensive therapy. Their physicians reported that 88% showed improved compliance when placed on once-daily INDERAL LA.

Control, comfort, and compliance

ONCE-DAILY
INDERAL[®] LA
(PROPRANOLOL HCl) LONG ACTING CAPSULES

Like conventional INDERAL Tablets, INDERAL LA should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree, and bronchial asthma.

*After a 30-day trial with INDERAL LA, physicians reported that 90% of the patients would remain on INDERAL LA.

**The one you know best
keeps looking better**

Please see next page for brief summary of prescribing information.

N O W A V A I L A B L E...
NEW LOW DOSE
INDERAL[®] LA 60 mg
(PROPRANOLOL HCl) LONG ACTING CAPSULES

The one you know best keeps looking better

BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION SEE PACKAGE CIRCULAR)

INDERAL® LA brand of propranolol hydrochloride (Long Acting Capsules)

DESCRIPTION. INDERAL LA is formulated to provide a sustained release of propranolol hydrochloride. INDERAL LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension. It may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first-degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE. Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema) — PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY. The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA. Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS. Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T_4 and reverse T_3 and decreasing T_3 .

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case, this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL. Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should

be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to return of increased intraocular pressure.

CLINICAL LABORATORY TESTS. Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS. Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reaction, especially in patients with severe cardiomyopathy, congestive heart failure or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol. Ethanol slows the rate of absorption of propranolol.

Phenyltol, phenobarbitone, and rifampin accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

Antipyrine and lidocaine have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T_3 concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY. Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 1 month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY. Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS. INDERAL is excreted in human milk. Caution should be exercised when INDERAL (propranolol HCl) is administered to a nursing woman.

PEDIATRIC USE. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: Bradycardia, congestive heart failure, intensification of AV block, hypotension, paresthesia of hands, thrombocytopenic purpura, arterial insufficiency, usually of Raynaud type.

Central Nervous System: Light-headedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to cataplexy, visual disturbances, hallucinations, vivid dreams, an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slight clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy and vivid dreams appear dose related.

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura. Auto-immune, in extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: Alopecia, LE-like reactions, psoriasisiform rashes, dry eyes, male impotence and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg-for-mg substitute. INDERAL INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION — Dosage must be individualized. The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood-pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 6 mg may be required. The time needed for full hypertensive response to a given dosage variable and may range from a few days to several weeks.

ANGINA PECTORIS — Dosage must be individualized. Starting with 80 mg INDERAL once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value of a safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE — Dosage must be individualized. The initial oral dose is 80 mg INDERAL once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is obtained within four to six weeks after reaching the maximal dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS — 80-160 mg INDERAL LA once daily. PEDIATRIC DOSAGE — At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

REFERENCES:

1. INDERAL LA National Compliance Evaluation Program. Data on file, Ayerst Laboratories.
2. Ravid M, Lang R, Jutrin I. The relative antihypertensive potency of propranolol, oxprenolol, atenolol, and metoprolol given once daily. *Arch Intern Med* 1985; 145:1321-1323.

R7119 58

Ayerst

AYERST LABORATORIES
New York, NY 10017

© 1987 Ayerst Laboratories

READY FOR AN OFFICE COMPUTER?

AUTO-MED INC. presents MEDICAL OFFICE SYSTEMS software ready to run on your IBM-XT, IBM-AT, or Compatible.

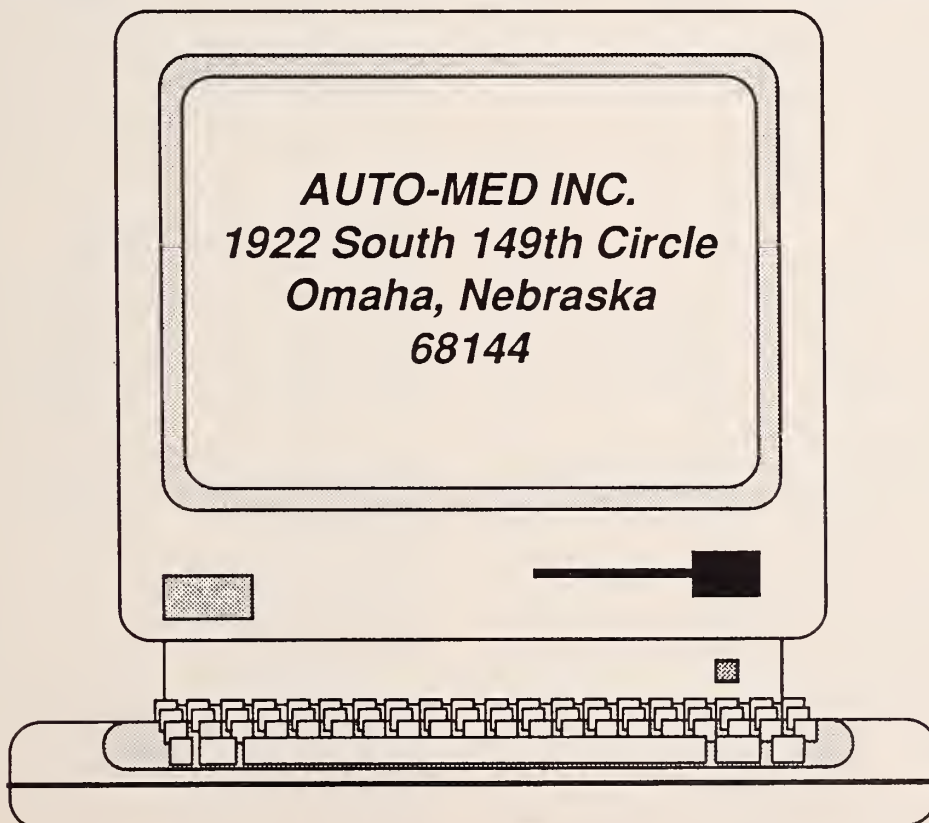
The MEDICAL OFFICE SYSTEM can be leased and supported for a low monthly fee with no "up-front" charges!

The MEDICAL OFFICE SYSTEM was developed by and for PHYSICIANS and includes the following features:

- * records patient demographic data * prints monthly statements * prints insurance forms
- * posts all charges in CPT code * records diagnosis in ICD-9 code * allows 20 fee schedules
- * detailed practice analysis * collection rate & accounts receivable analysis * audit trail
- * print patient face sheets * print charge tickets * print patient recalls
- * record non-patient practice income * medical data search * print day sheets * print mail labels

The MEDICAL OFFICE SYSTEM is available as a Complete System or Software alone - lease or purchase.

For Further information, demonstration disks, or documentation manuals contact:



A SPECIAL PRACTICE FOR SPECIALISTS.



If you're a **Surgeon or OB/GYN or Other Medical Specialist**, the Air Force may have a special practice for you. What makes it special? You'll enjoy an excellent pay and benefits package. There'll be more time to spend with your family. You'll receive 30 days of vacation with pay each year. And you will work with modern equipment and some of the most highly trained professionals in the world, serving your country and your patients. Now that's special! Find out just how special your practice can be. Call

TSgt James H. Sisley

(402) 556-0715

COLLECT



ORGANIZATIONS, NATIONAL

American Academy of Family Physicians
1740 West 92nd St., Kansas City, MO 64114

American Academy of Pediatrics
James E. Strain, M.D., Executive Director
141 Northwest Point Road, P.O. Box 927
Elk Grove Village, IL 60007

American Academy of Physician Assistants
F. Lynn May, Executive Vice President
1117 N. 19th St., 3rd Floor
Arlington, VA 22209

American Academy of Ophthalmology
Thomas P. Kearns, M.D., President
655 Beach Street, P.O. Box 7424
San Francisco, CA 94120-7424

American College of Emergency Physicians
Colin C. Rorrie, Jr., Ph.D., Exec. Director
Box 619911, Dallas, TX 75261-9911

American College of Legal Medicine
Miss Betty Hanna, Executive Secretary
213 W. Institute Place, Ste. 412, Chicago, IL 60610

American College of Obstetricians & Gynecologists
Warren H. Pearse, M.D., Executive Director
600 Maryland Avenue SW, Ste. 300 E
Washington, D.C. 20024

American College of Physicians
John R. Ball, M.D., F.A.C.P., Exec. Vice President
4200 Pine St., Philadelphia, PA 19104

American College of Radiology
John J. Curry, Executive Director
1891 Preston White Drive, Reston, VA 22091

American College of Surgeons
C. Rollins Hanlon, M.D., Director
55 East Erie St., Chicago, IL 60611

American Diabetes Association, Inc.
Robert S. Bolan, Exec. Vice President
1660 Duke Street, Alexandria, VA 22314

American Heart Association National Center
Mr. Dudley Hafner, Exec. Vice President
7320 Greenville Avenue, Dallas, TX 75231

American Hospital Association
Carol M. McCarthy, Ph.D., J.D., President
840 North Lake Shore Dr., Chicago, IL 60611

American Medical Association
James H. Sammons, M.D., Exec. Vice President
535 North Dearborn St., Chicago, IL 60610

American Society of Anesthesiologists
Mr. J. W. Andes, Executive Secretary
515 Busse Hwy., Park Ridge, IL 60068

American Society of Clinical Pathologists
Robert A. Dietrich, M.D., Chief Executive
2100 W. Harrison St., Chicago, IL 60612

American Society of Internal Medicine
Joseph F. Boyle, M.D., Exec. Vice President
1101 Vermont N.W., Ste. 500, Washington, D.C. 20005

American Urological Association, Inc.
Mr. Richard J. Hannigan, Executive Secretary
1120 No. Charles St., Baltimore, MD 21201

Arthritis Foundation
Clifford M. Clarke, C.A.E., President
1314 Spring St., N.W., Atlanta, GA 30309

International College of Surgeons
F. C. Ottati, M.D., Int. Sec. General
1516 North Lake Shore Dr., Chicago, IL 60610

National Rehabilitation Association
633 S. Washington St. Alexandria, VA 22314

Radiological Society of North America
James J. McCort, M.D., President
1415 W. 22nd St., Oak Brook, IL 60521

South Central Section of the American Urological Association, Inc.
Henry Kammandel, M.D., Past President
8300 Dodge St., Ste. 407, Omaha, NE 68114

THE NEBRASKA MEDICAL JOURNAL

The Incidence of Hospitalizations and Emergency Room Visits Resulting from Exposure to Chemicals Used in Agriculture

AS one of the objectives of a Cooperative Agreement between the Centers for Disease Control and the Nebraska Department of Health (NDOH) to improve the state's capacity to monitor occupational safety and health, the surveillance of a 21-county target area for incidence of injuries and illnesses related to the use of agricultural chemicals was conducted and recently completed. The inspiration for this study was suggested by the recommendations of an earlier investigation of similar incidents associated with pesticide use in Nebraska.¹ In tandem with these recommendations, the widespread use of agricultural chemicals in Nebraska, the preventable nature of chemical exposures, and the public concern generated by the occasional pesticide-related fatality made this particular health problem worthy of investigation at this time.

Methods

This study was designed to quantify the number of hospitalizations and emergency room visits resulting from exposure to chemicals used in agriculture which occurred recently within a 21-county area of central Nebraska. Prior to the 1985 crop-growing season, all target area hospitals were contacted by the NDOH to secure their cooperation to provide data on identified cases; all 18 hospitals agreed to participate. At the conclusion of the 1985 crop-growing season, the target area hospitals were contacted again by the NDOH and, if reporting a case, were visited by the Department's medical record specialist (D.K.K.) and relevant data were abstracted from available records. The hospitals were also asked to search their 1984 records for additional episodes; cases identified in this manner were included in this study

BRYAN A. RETTIG, M.S.*

DEBBIE K. KLEIN, R.R.A.

Division of Health Data and Statistical Research,
Nebraska Department of Health, Lincoln, NE 68509

JOSEPH E. SNIEZEK, M.D.

National Institute for Occupational Safety and Health,
Centers for Disease Control, Atlanta, GA 30333

and pertinent data were abstracted. All hospitalized cases included in the study required either a primary or secondary discharge diagnosis of a pesticide-related or agriculturally-related chemical poisoning, illness, or accident, as classified by the Ninth Revision of the International Classification of Diseases.² (Figure 1). Cases presenting at an emergency room during the same period of time were included if identified as resulting from exposure to an agricultural chemical by emergency room personnel. In addition, the NDOH also contacted most of the physicians in the target area at the conclusion of the 1985 growing season to obtain information about cases seen in their offices during 1985. These data have been used to supplement the information on 1985 incidents which involved both a physician office visit and a hospitalization and/or emergency room visit. Physicians in specialty fields unlikely to treat an exposure case were not contacted. Certain cases were excluded from the study after review of available records indicated that exposure to an agricultural chemical was not the factor responsible for seeking treatment, or may have been one of several possible factors.

*Reprint requests to: Bryan Rettig, Nebraska Department of Health, 301 Centennial Mall South, Lincoln, NE 68509.

Figure 1
ICD-9-CM Codes Used In The
Identification of Incident Cases

Code	Condition
289.7	methemoglobinemia
372.05	chemical conjunctivitis
506.0-506.9	respiratory conditions due to chemical fumes and vapors
692.4	contact dermatitis and other eczema, due to other chemical products (including acids, alkalis, caustics, insecticides)
947.0-947.9	burn of internal organs
981	toxic effect of petroleum products
983.0-983.0	toxic effect of corrosive aromatics, acids, and caustic alkalis
987.0	toxic effect of liquified petroleum gases
987.8	toxic effect of other specified gases, fumes, or vapors
989.0-989.4	toxic effect of hydrocyanic acid and cyanides, strychnine and salts, chlorinated hydrocarbons, organophosphate and carbamate, and other pesticides
989.8-989.9	toxic effects of other and unspecified substances, chiefly nonmedicinal as to source
E861.4	accidental poisoning by disinfectants
E862.1-E862.2	accidental poisoning by petroleum fuels and cleaners, and lubricating oils
E863.0-E863.9	accidental poisoning by agricultural and horticultural chemicals and pharmaceutical preparations other than plant foods and fertilizers
E866.5	accidental poisoning by plant foods and fertilizers
E868.0	accidental poisoning by liquified petroleum gas distributed in mobile containers
E869.8	accidental poisoning by chlorine and hydrocyanic acid gases and vapors
E924.1	accident caused by caustic and corrosive substances

Data analysis consisted of examination of the cases by certain demographic and exposure characteristics data. The incidence rate for the target area was calculated using the identified 1984 and 1985 cases and 1980 U.S. Census population figures. Confirmation of the validity of our estimates of the incidence of acute illness resulting from exposure to agricultural chemicals was attempted using other data sources. Death certificates and data from the Nebraska Ambulance and Rescue Squad Information System, on file at the NDOH, were examined for relevant cases. The Division of Maternal and Child Health within the NDOH was also contacted for information concerning recent cases of methemoglobinemia in infants (a.k.a. "blue babies").

Results

A total of 55 cases of injuries and illnesses caused by exposure to agricultural chemicals were seen at the target area hospitals during 1984 and 1985. However, five incidents are known to have occurred outside of the target area, while another two incidents occurred at unknown locations; although all seven were treated at a target area facility, these seven cases have not been included in any of the statistical analyses. Of the remaining 48 cases, no more than eight occurred in any one county; several counties did not have a single incident. Forty-three of the 48 cases were the result of isolated exposures; the rest were due to spray drift caused by an accident involving a truck carrying anhydrous ammonia (three cases) and exposure to a household termite-killer (two cases). Only two specific worksites (a chemical company and a construction site) were implicated in more than one incident, being mentioned in four and two cases, respectively. The annual incidence rate for the target area based on the 48 cases is 1.35 per 10,000 population (48 cases/177,292 population/2 years). This rate does not change appreciably when those target area counties devoted primarily to ranching (Hooker, Thomas, Blaine, Loup, McPherson, Logan) rather than farming are excluded from the rate calculations. A projection to the entire population of the State of Nebraska based on this incidence rate predicts approximately 200 hospitalizations and emergency room visits annually as a result of acute exposure to agricultural chemicals.

The mean age of the cases was 35.8 years, with a range of one to 80 years. Only three cases occurred among children 14 years of age and younger. Approximately two-thirds of the cases made their livelihood in agriculture, although not necessarily as a farmer or rancher.

Table 1 presents information concerning the chemicals reported as responsible for each incident. In some instances, more than one chemical may have been involved per case. The most frequently mentioned chemical was anhydrous ammonia, noted in one-third of all cases (16/48). Anhydrous ammonia was reported in over twice as many cases as the second most frequently mentioned agent, 2,4-D. Of the remaining 21 chemicals involved,

Table 1
Chemicals involved in incidents

Name of Chemical	Number of Cases
anhydrous ammonia	16
4-AP	1
atrazine	1
captan	1
chlordane	2
2,4-D	6
Di-Syston	1
Dual	1
Dursban	1
Dyfonate	1
EDB	1
Furadan	1
Isotox	2
Lasso	1
Mecoprop	1
Mocap	1
paraquat	1
parathion	5
Spectracide	1
Sutan	1
Tordon	1

NOTE: More than one chemical may have been reported per case; two (2) cases did not mention the specific chemical(s) involved.

only parathion was mentioned in more than two cases.

The circumstances responsible for each incident were grouped into four broad categories (accidental spill, spray drift, equipment failure, other) for summary purposes; these data are shown in Table 2. In five cases, the factors responsible for the incident fell into more than one category. Spray drift was the most common reason for exposure noted, occurring almost exclusively during ground application of chemicals. However, among occupationally-related incidents, (i.e., exposures occurring in the course of employment), which involved 38 of the 48 cases, equipment failure was most often the causal factor. Among the incidents related to the use of anhydrous ammonia, spray drift and equipment failure accounted for eight exposures apiece.

Table 2
Causes of incidents

Cause	Number of Cases
accidental spill	10
spray drift	20
equipment failure	13
other	4

NOTE: In five (5) cases, the circumstances of the incident warranted classification into more than one of the above categories; six (6) cases did not mention the circumstances responsible for exposure.

The symptoms noted in the medical records of the incident cases are listed in Table 3. Gastrointestinal and respiratory symptoms were mentioned 18 times apiece, followed closely by eye and skin conditions. These findings reflect the near-even split between dermal and inhalation exposures among the cases. Almost sixty percent of the cases (28/48) were treated in the emergency room and released; among the 19 cases hospitalized, the mean length of stay was 3.1 days. Two cases were transferred to other facilities for treatment.

Table 3
Symptoms of incident cases

Symptoms	Number of Cases
dizziness	10
fatigue (weakness, lethargy)	8
headache	12
respiratory symptoms	18 (dyspnea, 11 cases)
nausea and vomiting	13
other gastrointestinal symptoms	5
burns	11 (skin, 9 cases; eye, 2 cases)
conjunctivitis	4
other eye symptoms or mention of eye involvement	10
skin irritation	4
neurological symptoms	9
cardiovascular symptoms	6
other symptoms	19

NOTE: More than one symptom may have been mentioned per case; two (2) cases did not mention any symptoms.

Information from other data sources confirmed our hospital and emergency room findings. A systematic search of all 1984 and 1985 death certificates and Nebraska Ambulance and Rescue Squad Information system encounter forms found zero and one case, respectively, within the project target area. The Division of Maternal and Child Health of the Department of Health did not know of a single case of methemoglobinemia within the target area in either 1984 or 1985, which confirmed our findings precisely.

Discussion

These data undoubtedly present a conservative estimate of the acute health problems caused by exposure to chemicals used in agriculture in Nebraska. The methods employed to identify cases in this study were obviously biased toward the selection of the most serious incidents, i.e., those necessitating

an emergency room visit or hospitalization. Incidents not requiring such treatment, which can be difficult for the physician to identify due to the non-specific nature of the presenting symptoms and may not even warrant a visit to a physician, were not able to be quantified as a part of this effort.

Our data indicates that anhydrous ammonia is the most frequent agricultural chemical involved in exposures resulting in an emergency room visit or hospitalization. For the health professional treating such an exposure, as well as the person who handles this substance, it is important to know that, upon mixing with water, anhydrous ammonia forms an alkaline solution which can produce burns of the skin and mucosal surfaces. If ammonia gets into the eyes, they should be flushed with copious quantities of water for at least thirty minutes. With mild keratitis or conjunctivitis, supportive measures (antibiotics, cycloplegia, and patching) are necessary.³ Referral to an ophthalmologist may be indicated in some cases. Skin contact also requires flushing with large quantities of water. Salves or ointments should not be used in the 24 hours following injury since this prevents the elimination of ammonia from the skin. After the first 24 hours, medical treatment is the same as for thermal burns.⁴ Persons handling anhydrous ammonia should also be aware of the need for proper maintenance of transport, storage, and application equipment and the advisability of wearing protective clothing, particularly eye goggles.

Even though these data do not describe the entire spectrum of acute problems created by exposure to agricultural chemicals, evidence from other sources indicates that the relatively small number of incidents identified in this study is probably an acceptable indicator of the extent of the problem. The number of cases incidence of methemoglobinemia in infants and the number of deaths due to poisoning by chemicals used in agriculture are known to be small, in spite of the enormous publicity that usually surrounds the occasional case.⁵ Surveys of agricultural workers and health care facilities have also documented that the incidence of non-fatal acute health problems resulting from the use of agricultural chemicals is relatively low,^{1, 6-9} however, most of these studies have not been able to avoid

the biases of underreporting and underdetection of cases. Perhaps the relatively small number of incidents quantified in this and other research efforts reflects the success of the numerous government initiatives of the past 10-15 years to improve public awareness of workplace hazards, although there is limited data to support this. The regulation of sales of certain chemicals to persons receiving instruction in proper handling and application techniques may also have played a key role in keeping serious incidents to minimum levels.

Finally, it should once again be emphasized that the full spectrum of acute health problems related to the use of agricultural chemicals could not be completely ascertained given the methodology of this study. Certainly, efforts to maximize public awareness of the dangers resulting from improper use of agricultural chemicals should continue. It should also be recognized that the findings of several recent studies have indicated that the most debilitating health effects associated with exposure to agricultural chemicals may be chronic in nature,¹⁰⁻¹⁵ and are probably the result of long-term chemical usage rather than a single, brief exposure. A similar surveillance effort will be conducted in 1986, in a different region of the state; the results of this second study will provide data with which to compare the findings presented in this report.

Summary

This study was designed to determine the incidence of hospitalizations and emergency room visits resulting from exposure to chemicals used in agriculture which occurred recently within a 21-county area of central Nebraska. Forty-eight cases were identified, which translated into an annual incidence rate of 1.35 cases per 10,000 population. Anhydrous ammonia was the chemical most frequently cited as responsible for exposures.

Acknowledgement

This study was supported by Grant No. V53/CCU-700776-03 from the Centers for Disease Control of the U.S. Public Health Service.

References

1. Vitzthum EF, Gold RE, Olson DL. Assessing Pesticide Impact on Human Health in Nebraska: A Survey of Hospital Administrators. Department Report No. 8, Cooperative Extension Service, Institute of Agriculture and Natural Resources. University of Nebraska-Lincoln, 1984.

2. World Health Organization. International Classification of Diseases, Ninth Revision, Clinical Modifications. Ann Arbor, MI: Commission on Professional and Hospital Activities, 1978.

3. Olson RJ. Occupational eye disorders. In Environmental and Occupational Medicine. Rom WN (Ed.) Boston: Little, Brown, 1983.

4. Centers for Disease Control. A Guide for Developing a Training Program for Anhydrous Ammonia Workers. US Government Printing Office: Publication no. NIOSH 79-199, 1978.

5. Grant RS. Well water nitrate poisoning review: a survey in Nebraska, 1973-1978. *Nebr Med J* 66:197-200, 1981.

6. National Safety Council. Accident Facts. Chicago: National Safety Council, 1985.

7. Bonsall JL. Pesticides and health in developed countries. In Occupational Hazards of Pesticide Use. Turnbull GJ (Ed.) London: Taylor and Francis, 1985.

8. Coye MJ. The health effects of agricultural production: I. The health of agricultural workers. *J Pub Hlth Policy* 6:349-370, 1985.

9. Whiting WB. Occupational illnesses and injuries of California agricultural workers. *J Occup Med* 17:177-181, 1975.

10. Blair A, Grauman DJ, Lubin JH, Fraumeni JF. Lung cancer and other causes of death among licensed pesticide applicators. *JNCI* 71:31-37, 1983.

11. Blair A, Thomas TL. Leukemia among Nebraska farmers: a death certificate study. *Am J Epi* 110:264-273, 1979.

12. Blair A, Everett G, Cantor K, Gibson R, Schuman L, Isacson P, Blattner W, Van Lier S. Leukemia and farming practices. (abstract) *Am J Epi* 122:535, 1985.

13. Cantor K, Everett G, Blair A, Gibson R, Schuman L, Isacson P. Farming and non-Hodgkin's lymphoma. (abstract) *Am J Epi* 122:535, 1985.

14. Everett G, Blair A, Cantor K, Gibson R, Van Lier S. Environmental chemical exposure as risk factors for leukemia and non-Hodgkin's lymphoma. (abstract) *Am J Epi* 122:535-536, 1985.

15. Weisenburger DD. Lymphoid malignancies in Nebraska: a hypothesis. *Nebr Med J* 70:300-305, 1985.

Cardiovascular Effects of Tricyclic Antidepressants and Their Rational Use in Depressed Cardiac Patients

IN 1957, Kuhn first described the effectiveness of imipramine in treating depression.¹ Since then several other kinds of tricyclic antidepressants (TCA's) have been used. Some years later, side effects from the cardiovascular system were reported. These side effects included hypotension and ST-T changes in the ECG.² Subsequently there have been numerous reports of tricyclic antidepressants causing dangerous arrhythmias and sudden death.^{3,4,5,6} Such reports lead to the restricted use of tricyclic antidepressants in cardiac patients with major depression. The original thought of tricyclic antidepressants being cardiotoxic was derived mainly from the evidence that an overdose can produce marked disturbances in cardiac rhythm and ventricular conduction.⁷ Recently, a report by Veith, et al, concluded that tricyclic antidepressants can be effectively used in depressed cardiac patients without an adverse effect on ventricular rhythm and hemodynamic function.⁸ With the current increased level of understanding of the mechanisms and effects of tricyclic antidepressants on the cardiovascular system, we believe it is not justified to withhold these medications purely because the patient has cardiac pathology.

Pharmacologic Properties

The potential effects of antidepressants on the cardiovascular system can be best appreciated by examining the pharmacological properties of tricyclic antidepressants. The antidepressants are highly concentrated in cardiac muscle and thus influence normal cardiovascular regulation.⁹ Tricyclic antidepressants exert their therapeutic effect by multiple actions on monoamine synapses such as by blocking presynaptic reuptake of serotonin and norepinephrine, decreasing presynaptic alpha-2 receptor sensitivity, and producing a postsynaptic decrease in the sensitivity of the beta-adrenergic-coupled adenylate cyclase system.^{10,12} There are three

ARUN SHARMA, M.D.*

Senior Resident in Psychiatry, Creighton University School of Medicine, Omaha, Nebraska

JAMES O'SULLIVAN, M.D.

Staff Psychiatrist, V.A. Medical Center, Omaha, Nebraska, Associate Professor of Clinical Psychiatry, Creighton University School of Medicine, Omaha, Nebraska

potential effects of tricyclic antidepressants on cardiovascular regulation and which should be taken into account when prescribed for patients with cardiac disease. These include anticholinergic effects, orthostatic hypotension, and prolongation of intraventricular conduction.¹³

The anticholinergic properties of tricyclic antidepressants antagonize the parasympathetic slowing of the heart and produce an increase in heart rate.¹⁴ Orthostatic blood pressure changes can be explained by their ability to antagonize peripheral alpha-1 adrenergic receptors.¹⁵ It has also been speculated that tricyclic antidepressants or their hydroxy metabolites may directly alter cellular electrophysiological properties of myocardial tissues, which may account for interventricular conduction delay and possibly to antagonize cardiac pump function at high concentrations.^{16,17}

CARDIOVASCULAR EFFECTS OF TCA'S AT THERAPEUTIC DOSES

Effects on Cardiac Rate

Sinus tachycardia is a common finding at a therapeutic level of tricyclic antidepressants.

*Reprint Requests: Arun Sharma, M.D., Department of Psychiatry, Creighton University School of Medicine, 2205 South 10th Street, Omaha, Nebraska 68108. Telephone (402) 449-5047.

The increase in heart rate is due to an anticholinergic action (atropine like) by inhibiting parasympathetic activity.¹⁴ Pitts reported sinus tachycardia in 30% of patients with amitriptyline and 2.9% with doxepin.¹⁸ Another study by Burrows, et al, concluded an increase in heart rate in 80% of his patients with normal hearts treated with tricyclic antidepressants with a usual dose of 150 mg/day.¹⁹ Most of the currently available tricyclic antidepressants have significant anticholinergic effect. But in general, tertiary amines (e.g. Amitriptyline, Doxepin, Imipramine) have more anticholinergic action than secondary amines (e.g. Desipramine, Nortriptyline). Protriptyline (secondary amine) is one such exception to the above effect as it tends to have the worst anticholinergic effects.²⁰ It would seem appropriate to use secondary amines in place of tertiary amines where sinus tachycardia in a patient with cardiac disease may be detrimental. Even if tachycardia does not develop, these drugs must be monitored for other anticholinergic side effects (constipation, urinary retention, dry mouth, etc.) and initiating therapy with low doses, and slow and gradual increase in dose is most beneficial.

Effect On Blood Pressure

Orthostatic hypotension is a commonly seen side effect produced by tricyclic antidepressants and is associated with their affinity for alpha-1 adrenergic receptor sites in the brain.²¹ Postural hypotension is more likely to occur in the presence of pre-existing cardiovascular disease. Numerous studies suggest that more than 20 percent of patients receiving these agents will experience postural hypotension.²¹⁻²⁴ Glassman, et al, found that the best predictor of orthostatic hypotension was the degree of orthostatic hypotension prior to treatment.²⁴ Tertiary amines tend to cause more severe hypotensive effects than secondary amines. Among tertiary amines imipramine seems to be the worst offender.¹³ Two studies have concluded that desipramine and nortriptyline are less likely to produce orthostatic changes.^{26,27} It seems relevant and important to take into account such factors as antidepressant dose, the presence of heart disease and specific type of drug to be used in each case.

It is our clinical impression, not proven by vigorous studies, that gradual increase in tricyclic antidepressants dose may help the

patient to adjust to orthostatic blood pressure drop.¹³ There is evidence that lessening in orthostatic side effects itself occurs when the drug is used beyond one year.²⁸ Considering this data, the patient can be best managed by checking his pretreatment orthostatic fall. In case of fall of more than 10-15 mm Hg, the chances of even more significant fall in blood pressure increases. At this point, if the patient is not able to tolerate this effect, a change to secondary amine can be tried.

There is experimental evidence of tricyclic antidepressants causing hypertensive reactions in man.²⁹ The use of Clomipramine has been associated with hypertension. Tricyclic antidepressants are also known to interfere with antihypertensive effect of guanethidine and its congeners. But Doxepin at doses less than 100 mg per day does not have this effect and so can be used effectively in depression associated with hypertension.³¹

Effect On Cardiac Conduction

Until the late 1970's, it was widely believed that tricyclic antidepressants were likely to induce arrhythmias in patients with cardiac disease, even in therapeutic doses. Recent clinical studies by Petit, et al, and Spiker, et al, have found that a tricyclic antidepressant level of 1,000 mg/ml or greater was associated with cardiac arrhythmias, increased frequency of ventricular rate of 120 beats per minute, bundle branch block and cardiac arrest.^{32,33} Vohra, et al, concluded by using Hisbundle electrocardiography that TCA's have similar effect on cardiac conduction as Class 1-A antiarrhythmics such as quinidine and procainamide.³⁴ These studies showed that tricyclic antidepressants delay intraventricular conduction by prolonging transit of electrical impulses through the Purkinje system of the ventricles. Among the tricyclic antidepressants, Doxepin HCl may be less prone to cause slow post AV nodal conduction. Of the currently used tricyclic antidepressants, imipramine and nortriptyline in therapeutic doses effectively reduce ventricular dysarrhythmias.^{7,35} On reviewing the data from recent human and animal studies, it seems likely that this property of antiarrhythmic ability is shared by other tricyclic antidepressants as well.

In summary, a history of myocardial infarction, coronary artery disease, and prior bypass

surgery should not prevent the physician in using tricyclic antidepressants judiciously in mentally depressed patients. A baseline ECG will identify the patient in whom conduction defects are already present. Starting with a low dose and gradual increase in dose with serial ECG monitoring may be most beneficial. If the QRS interval is normal pre-treatment, and becomes greater than 100 milliseconds with treatment, and/or the plasma level is 1,000 mg/ml or greater, TCA overdose should be considered.^{32,33}

Effect On Myocardial Contractility

For years it has been thought that tricyclic antidepressants exert negative inotropic and chronotropic effects. Earlier studies of systolic time intervals have shown that tricyclic antidepressants in therapeutic doses tend to decrease myocardial contractility.^{38,40} These studies were done by simultaneous recording of the ECG, phonocardiogram and carotid pulse wave. This indirect measurement of myocardial function may not reflect the true effect of TCA's on myocardial contractility, as factors like sex, age, heart rate, blood pressure and bundle branch block affect the systolic time interval as well. In the more recent work of assessing the effect of TCA's on myocardial contractility using much more sensitive and reliable techniques of radionuclide ventriculogram has shown that there was not adverse effect on the left ventricular function, when therapeutically effective doses of imipramine and doxepin were used.^{45,46}

Treatment Implications

It is evident from the above discussion that the best antidepressant for a depressed cardiac patient would be one with no or limited amount of side effects. It is now possible to treat such patients more effectively than to leave them with no treatment and suffer the consequences of high morbidity and mortality of depression. The choice of antidepressant in cardiac patients should rest upon the side effect profile of the medication chosen. It is also important to keep in mind that in high risk individuals with uncontrolled and/or unstable cardiovascular disease, other treatment options such as monoamine oxidase (MAO) inhibitors, ECT and newer nontricyclic antidepressants should be considered. An increase in heart rate may be poorly tolerated by patients with significant ischemic heart disease with severe

angina. When sinus tachycardia is a potential problem, a secondary amine (Desipramine and Nortryptine) is preferable.

Special care should be exercised in treating patients with pre-existing conduction defects (2nd or 3rd degree AV block or bundle branch block) and those receiving concomitant Class 1-A antiarrhythmic drugs. MAO inhibitors, which do not delay intraventricular conduction, might be considered as an alternative treatment.

Since orthostatic changes are potentially hazardous, then pre- and post-treatment orthostatic changes should be followed and start with low doses. Desipramine and especially Nortryptiline are less likely to cause orthostatic changes and may offer an advantage.

Summary

If a major depressive disorder is diagnosed in a patient with pre-existing heart disease, tricyclic antidepressants should not necessarily be withheld because of concern for the cardiotoxicity of their agents. It is evident from the published research that in the absence of severe impairment of myocardial performance, mentally depressed patients with pre-existing cardiac disease can be effectively treated with tricyclic antidepressants without an adverse effect on blood pressure, ventricular conduction, and hemodynamic function.

References

1. Kuhn R: Über die behandlung depressives zustande mit einen iminodibenzyllderativ (G-22355). Schweiz Med Wochenschr 87:1135-1140, 1957.
2. Kritiansen ES: Cardiac complications during treatment with Imipramine. Acta Psychiatr Scand 36:427-442, 1961.
3. Coull DC, Crooks F, Dingwall-Fordyce I, et al: Amitryptiline and Cardiac Disease: Risk of sudden death identified by monitoring system. Lancet 2:590-591, 1970.
4. Moir DC: Tricyclic antidepressants and cardiac disease. Am Heart J 86:841-842, 1973.
5. Fowler NO, McCall D, Chou T, et al: Electrocardiographic changes and cardiac arrhythmias in patients receiving psychotropic drugs. Am J Cardiol 37:223-230, 1976.
6. Robinson DS, Barker E: Tricyclic antidepressant cardiotoxicity. JAMA 236:2089-2090, 1976.
7. Bigger JT Jr, Kantor SH, Glassman AG, et al: Cardiovascular effects of tricyclic antidepressant drugs in psychopharmacology: A Generation of Progress. Edited by Lipton MA, DiMascio A, Killam AF. New York, Raven Press, 1978.
8. Veith RC, Radkind MA, Caldwell JH, et al: Cardiovascular effects of tricyclic antidepressants in

depressed patients with chronic heart disease. *N Engl J Med* 306:954-959, 1982a.

9. Weld FM, Bigger JT Jr: Electrophysiological effects of imipramine on ovine cardiac purkinje and ventricular muscle fibers. *Circ Res* 46:167-175, 1980.

10. Schildkraut J: The catecholamine hypothesis of affective disorders: A review of supporting evidence. *Am J Psychiatry* 122:509-522, 1965.

11. Crews FT, Smith CB: Presynaptic alpha-receptors sensitivity after long-term antidepressant treatment. *Science* 202:322-324, 1978.

12. Maas JW: Biogenic amines and depression: Biochemical and pharmacological separation of two types of depression. *Arch Gen Psychiatry* 32:1357-1361, 1975.

13. Cassem N: Cardiovascular Effects of Antidepressants. *J Clin Psychiatry* 43:11 [Sec. 2] 22-28, 1982.

14. Raisfeld IN: Cardiovascular complications of antidepressant therapy. *Am Heart J* 83:129-133, 1972.

15. U'Pritchard DC, Greenberg DA, Sheehan PP, et al: Tricyclic antidepressants: Therapeutic properties and affinity for alphanoradrenergic receptor binding sites in the brain. *Science* 199:197-199, 1978.

16. Issac L: Clonidine in the central nervous system: Site and mechanism of hypotensive action. *J Cardiovasc Pharmacol* 2:55-519, 1980.

17. Young RC, Alexopoulos GS, Shamoian CA, et al: Heart failure associated with high plasma 10-hydroxy-nortryptiline levels. *Am J Psychiatry* 141:432-433, 1984.

18. Pitts NE: The clinical evaluation of Doxepin — A new psychotherapeutic agent. *Psychosomatics* 10:164-171, 1969.

19. Burrows GD, Vohra J, Hunt D, et al: Cardiac effects of different tricyclic antidepressant drugs. *Br J Psychiat* 129:335-341, 1976.

20. Tollefson GD, Senogler SE, Frey II WH, et al: A comparison of peripheral and central human muscarinic cholinergic receptor affinities for psychotropic drugs. *Biol Psychiatry* 5:557-567, 1982.

21. Glassman AH, Bigger JT Jr: Cardiovascular effects of therapeutic doses of tricyclic antidepressants: A review. *Arch Gen Psychiatry* 38:815-820, 1981.

22. Glassman AH, Bigger JT Jr, Giardina EGV, et al: Clinical characteristics of imipramine induced orthostatic hypotension. *Lancet* 1:468-472, 1979.

23. Glassman AH, Johnson LL, Giardina EGV, et al: The use of imipramine in depressed patients with congestive heart failure. *JAMA* 250:1997-2001, 1983.

24. Veith RC, Bloom V, Bielski R, et al: ECG effects of comparable plasma concentrations of desipramine and amitryptiline. *J Clinical Psychopharmacol* 2:394-398, 1982b.

25. Roose SP, Nurnberger JI, Dunner DL, et al: Cardiac sinus node dysfunction during lithium treatment. *Am J Psychiatry* 136:804-806, 1979.

26. Thayssen P, Bjerre M, Kragh-Sorensen P, et al: Cardiovascular effects of imipramine and nortryptiline in elderly patients. *Psychopharmacology* 74:360-364, 1981.

27. Roose SP, Glassman AH, Siris SG, et al: Comparison of imipramine and nortryptiline induced orthostatic hypotension: A meaningful difference. *J Clin Psychopharmacol* 1:316-319, 1981.

28. Bluckhardt D, Raever E, Muller V, et al: Cardiovascular effect of tricyclic and tetracyclic antidepressants. *JAMA* 239:213-216, 1978.

29. Osborne M, Sigg EB: Effects of imipramine on the peripheral autonomic system. *Arch Int Pharmacodyn* 129:273-289, 1960.

30. Hessov I: Hypertension during chlorimipramine therapy. *Br Med J* 1:406, 1971.

31. Ban T: Chronic disease and depression in the geriatric population. *J Clin Psychiatry* 45:18-23, 1986.

32. Petit JM, Spiker DG, Ruwich JF, et al: Tricyclic antidepressant overdose: Clinical presentation and plasma levels. *Clinical Pharmacol Ther* 21:47-51, 1977.

33. Spiker DB, Weiss AN, Chang SS, et al: Tricyclic antidepressant overdose: Clinical presentation and plasma levels. *Clin Pharmacol Ther* 18:539-546, 1975.

34. Vohra J, Burrows G, Hunt D, et al: The effect of toxic and therapeutic doses of tricyclic antidepressant drugs on intracardiac conduction. *European Journal of Cardiology* 3:219-227, 1975.

35. Giardina EGV, Bigger JT Jr: Antiarrhythmic effect of imipramine hydrochloride in patients with ventricular premature complexes without psychological depression. *Am J Cardiol* 50:172-179, 1982.

36. Bigger JT Jr, Giardina EGV, Perel JM, et al: Cardiac antiarrhythmic effect of imipramine hydrochloride. *N Engl J Med* 296:206-208, 1977.

37. Schwartz PJ, Wolf S: QT interval prolongation as predictor of sudden death in patients with myocardial infarction. *Circulation* 57:1074-1077, 1978.

38. Taylor DJE, Braithwaite RA: Cardiac effects tricyclic antidepressant medication: A preliminary study of nortryptiline. *Br Heart J* 40:1005-1009, 1978.

39. Kopera H, Fluch N, Harpf H, et al: Cardiovascular effects of mainserin — a comparative study with amitryptiline and a placebo in healthy subjects. *Int J Clin Pharmacol Ther Toxicol* 18:104-109, 1980.

40. Raeder EA, Burckhardt D, Neubauer H, et al: Long term tri- and tetracyclic antidepressants, myocardial contractility, and cardiac rhythm. *Br Med J* 2:666-667, 1978.

A Case Study on the Effects of Strenuous Exercise on Serum Lithium Levels

IT has been noted since the times of Soranus of Ephesus (circa 500 AD) that alkaline waters from mineral springs seemed to control the manic excitement of some people. In the late 1940's an Australian by the name of J. F. J. Cade discovered and pioneered the use of lithium salts in a psychiatric setting to control manic episodes. Currently, lithium is the drug of choice for bipolar disorders in both the acute manic episode and prophylactic treatment of bipolar psychosis.

Traditionally, for prophylaxis and control of acute manic episodes, a serum lithium level of 0.5 mEq/l to 1.2 mEq/l is desired. Above a level of 1.2 mEq/l, signs of lithium toxicity begin to appear. As recently as November 1986, Kang, et al¹ in a literature review on the clinical uses of lithium in bipolar disorders discussed that lithium levels need to be assessed carefully to avoid lithium toxicity.¹ Many before Kang, et al¹ expressed the opinion that the risk of lithium intoxication increases with heavy sweating.^{2,3,4,5} the mechanism being dehydration and sodium loss. A small minority of investigators, however, question the loss of lithium in sweat which would lead to lower serum lithium levels.⁶

The presentation to the Norfolk Regional Center, Norfolk, Nebraska, of a young male with a diagnosis of bipolar disorder, acute manic phase with psychosis, prompted this study. Reportedly he has been compliant with medical treatment until the manic episode developed. Family reports indicated a high degree of motivation to control the disorder. Since diagnosis approximately three years ago, the patient had experienced 7 episodes clustered in the middle to late summer and late winter to early spring. Once he had responded to lithium and was not psychotic, the patient appeared to be an intelligent young man with good insight into his disease. He was also noted to be an avid runner (5 miles/day) during the summer and fall, as well as a distance swimmer (1½ to 2 miles/day) during the winter

THOMAS C. NORMAN, R.N., PA Student
WAYNE MATHEWS, PA-C
CHARLES D. YOHE, M.D.

and spring. A review of the literature revealed that Jefferson, et al, proposed that strenuous exercise could lead to serum lithium depletion via a high degree of sweat loss of lithium.⁷

The following experiment was performed with the full cooperation of this young man to test the hypothesis that copious sweating could lead to serum lithium depletion and, over the long term, subtherapeutic lithium levels with resultant manic episodes.

Method:

A healthy experienced male runner in his early twenties with a diagnosis of bipolar disorder was stabilized on lithium citrate initially, then changed to lithium carbonate for three weeks status post manic episode. Serum levels were consistently 0.9 mEq/l to 1.0 mEq/l for two weeks prior to the run. The subject's food and fluid intake were not restricted. On the morning of the run a serum lithium level was drawn. Immediately after running, a serum lithium level was drawn. Sweat was collected after the run by collection of drops falling from the patient. A serum level was also drawn the following morning after rehydration and a dose of Lithium Carbonate 300 mg. at 2100 the night before. On the day of the run, the air temperature was 45° F (9 °C) with a wind of 10-15 miles/hr at about 90° to the course. The patient wore a standard T-shirt, sweatpants and a sweatshirt during the run.

Results:

The subject had maintained a steady state of serum lithium of 0.9 mEq/l to 1.0 mEq/l

for three weeks prior to the run, including the morning of the 5 mile run. Immediately after the run, the serum lithium was 0.7 mEq/l. Sweat lithium was 2.2 mEq/l. It was noted that the patient's T-shirt and sweatshirt were both saturated sweat. The following morning, after rehydration and 300 mg. of Lithium Carbonate was given ten hours prior to the sample drawn, the serum lithium level was 0.7 mEq/l. The precise weight of the patient or of the clothing before and after was not obtained. However, a serum to sweat lithium ratio could be calculated which reveals that sweat loss of lithium was substantial (approximately 1:3).

Discussion:

Jefferson, et al, showed the serum lithium to decrease due to sweat lithium loss.⁷ They found the ratio of sweat lithium to sweat sodium to be proportionately higher based on an analysis of sweat to serum concentration ratios. Miller et al,⁶ found that the lithium concentration of sweat via a pilocarpine stimulated test ranged from 1.2 to 4.6 times the serum concentration of lithium. Others have proposed a similar loss of lithium due to sweat loss.⁷

It is of interest to note that the patient whose manic episodes prompted this study was on a stable dosing of lithium (600 mg. b.i.d.) while running approximately 5 miles/day during the summer and swimming about 1½ miles/day during the winter. Sweat loss was substantial and it is theorized that regardless of compliance with medical treatment, his serum levels of lithium became subtherapeutic, and he experienced clusters of manic episodes. His short term hospitalizations to re-institute lithium therapy, with discharge on the same dose, and resuming his running activity, would lead to a cycle of manic episodes due to sweat depletion of lithium.

Lithium is a small cation, smaller and more active than sodium. It is well known that the body selectively conserves sodium and it is theorized that this conservation is done at the expense of lithium. This elimination of lithium via sweat is in apparent opposition to the

lithium intoxication previously described by many^{1,2,3,4,5} However, it is questionable whether they took into account the dehydration with subsequent hemoconcentration giving rise to an apparent lithium toxicity. It is of interest to note that the subject's serum lithium was 0.7 mEq/l immediately after the run and still 0.7 mEq/l after rehydration and 300 mg. of Lithium Carbonate. It is interesting to speculate what the serum lithium would be after rehydration without a dose of the Lithium Carbonate.

From our case study it seems that lithium is depleted in sweat during hot weather or heavy exercise leading to a lower serum lithium concentration rather than the lithium toxicity previously described. Consequently, we propose that patients with a bipolar disorder require an **increase** in lithium dose during heavy exercise or periods of heavy sweat loss in order to maintain serum lithium levels. The belief that heavy sweating leads to lithium toxicity appears to be not only invalid, but in the event of a decrease in dosing, could lead to subtherapeutic levels with resultant manic episodes.

Although further investigation is warranted, we suggest more careful monitoring and dose adjustments to maintain therapeutic levels under the conditions described.

References

1. Kang JS, Chu C-C, Ruedrich SL, Wilson JL, Williams SE: Clinical Uses of Lithium in Manic-Depressive Illness. *Nebraska Medical Journal*, Nov. 1986:383-389.
2. Granoff AL, Davis JM: Heat Illness Syndrome and Lithium Intoxication. *J. Clin Psychiatry* 39:103-107, 1975.
3. Savon BM: Sweat Lithium in Manic Depression. *Br J Psychiatry*, 134:445, 1979.
4. McSwiggan C.: Practical Tips for Lithium Maintenance Therapy. *Med. J Aust.* 1:89-92, 1979.
5. Schoo M: Lithium Treatment of Manic-Depressive Illness. *Bosel, S. Karger*, 1980, Pg. 48.
6. Miller CB, Parn RW, Skryal PJ: Sweat Lithium in Manic-Depression, *Br. J. Psychiatry* 133:477-478, 1978.
7. Jefferson JW, Greist JH, Ilagnay PJ, Sschems RR, Morteno WC, Evenson MA: Effect of Strenuous Exercise on Serum Lithium Level in man. *Am. J. Psychiatry* 139:12-1593-1595.

FRACTURE OF THE MONTH

Fracture Dislocation from a "Jammed Finger" — A Common Problem With Potential Pitfalls

THE "jammed finger" is a common injury usually sustained by young active individuals during ball handling sports. Although generally dismissed as a minor problem, such an injury may produce significant finger stiffness and even functional impairment of the whole hand. Such sequelae may be avoided by accurate diagnosis and appropriate treatment as illustrated by the following case report.

Case History

A 28 year old right handed woman injured the proximal interphalangeal (PIP) joint of her right ring finger while playing softball. She presented to the emergency room where a splint was applied and she was then referred to an orthopaedist. Physical examination one day after her injury revealed the PIP joint of the right ring finger was swollen and unstable dorsally. Range of motion of the joint was limited to 20° of flexion. The distal interphalangeal and metacarpalphalangeal joints were not injured. Distal neurovascular exam was normal. Radiographs revealed a fracture

JOHN F. CONNOLLY, M.D.

JAN DAVIS, M.D.

THOMAS P. FERLIC, M.D.

From the combined programs in Orthopaedic Surgery, University of Nebraska Medical Center, Creighton University, Omaha Veterans Administration Hospital, 42nd & Dewey Avenue, Omaha, NE 68105-1065

dislocation of the PIP joint with dorsal displacement of the middle phalanx (Figure 1).

Discussion

To determine the true nature of a jammed finger one should carefully assess the injured area by systematic physical and x-ray examination. Physical examination must include palpation for specific sites of tenderness, testing of active motion, and active and passive stressing for signs of instability. In some cases this may require digital block anesthesia to permit complete assessment of the injury.



FIGURE 1

1. The x-rays on the initial evaluation show a fracture-dislocation of the PIP joint. The joint tended to dislocate dorsally on extension. Note that this x-ray provides a true lateral view of injured finger and not the hand.

Radiographic examination should be centered on the finger, not on the hand, so that subtle findings will not be missed.

The examiner should consider a number of possibilities, depending on which joint has been jammed. Loss of active extension of the distal interphalangeal (DIP) joint causes mallet finger deformity or avulsion of the extensor tendon from its insertion. Radiographs usually reveal the site of bony attachment is displaced proximally. Inability to flex the DIP joint actively indicates the flexor tendon is avulsed. Bone pulled away with the tendon may occasionally be seen on x-ray; however, most flexor tendon avulsions are not associated with fractures, and diagnosis is dependent on carefully testing for loss of active flexion at the distal phalanx. Tenderness is localized to the site where the flexor tendon has retracted in the sheath or palm.

PIP joint injuries should prompt consideration of several possibilities. Rupture of the central slip of the extensor tendon causes volar instability of the PIP joint. Untreated, this injury will lead to a boutonniere deformity with a flexion contracture of the PIP and hyperextension deformity of the DIP joints. Injury to the volar plate of the PIP joint will produce dorsal instability, which if neglected, will progress to a swan neck deformity. This is characterized by hyperextension of the PIP joint and difficulty initiating flexion. If the

hyperextension force which usually causes the jammed finger is combined with sufficient axial compression, the articular surface of the middle phalanx will fracture and the joint will dislocate, as in our present case. Even with prompt diagnosis, the management of a fracture-dislocation of the PIP joint has potential pitfalls. Prolonged immobilization leads to an unacceptable frequency of joint stiffness following closed or open reduction.^{1, 2} Open reduction is also largely precluded by the usually comminuted nature of the fracture.³ Thus, the challenge is to treat this injury so as to restore joint stability and congruity while minimizing loss of motion.

Management

Good functional results after this injury can be obtained by using the method of extension-block splinting.^{4, 5} The dislocation is first reduced by longitudinal traction and volar pressure applied over the base of the middle phalanx under digital block anesthesia. Reduction should be checked with a lateral x-ray (Figure 2). Next a plaster gauntlet is applied to the forearm incorporating a one inch wide malleable metallic splint which extends out over the dorsum of the injured digit. This splint is bent to allow PIP extension to an angle 10°-15° short of where joint instability recurs. Care should be taken that the extension block splintage allows PIP motion only within this stable range. Full active flexion is



FIGURE 2

2. X-rays after the PIP joint was reduced in flexion using an extension block splint.



FIGURE 3

3. AP and lateral x-rays after twelve weeks showed healing of the fracture-dislocation with maintenance of joint space and close to full restoration of motion.

encouraged from the outset. The patient is seen at weekly intervals and lateral x-rays are taken to ensure maintenance of reduction. The splint is gradually extended until full extension is achieved over a period of four to twelve weeks. Although originally recommended for fractures with 30 to 50 percent articular surface involvement, it has been successfully used for larger fracture defects.

In the present case, the patient's extension was first blocked at approximately 60° , with maximum flexion allowed to 95° . Gradual increases in extension were allowed over a period of seven weeks. At the last follow up twelve weeks after injury, PIP motion was from 5° to 105° , nearly symmetrical to the uninvolved finger. Radiographs revealed restoration of reasonable joint congruity (Figure 3).

This case illustrates that the jammed finger need not always result in a stiff finger.

References

1. Eaton GE, and Dray GJ: Dislocations and Ligament Injuries in the Digits. In **Operative Hand Surgery**, edited by D.P. Green, Vol 1, p 637-659. New York, Churchill Livingstone, 1982.
2. Lee ML: Intraarticular and Periarticular Fractures of the Phalanges. *J Bone and Joint Surg*, 45-B:103, 1963.
3. Wilson JN, Rowland SA: Fracture-Dislocation of the Proximal Interphalangeal Joint of the Finger, Treatment by Open Reduction and Internal Fixation, *J Bone and Joint Surg*, 48A:493, 1966.
4. McElfresh EC, Dobyns JH: Management of Fracture-Dislocations of the Proximal Interphalangeal Joints by Extension-Block Splinting, *J Bone and Joint Surg*, 54A:1705, 1972.
5. Connolly JF: Management of Fractures and Dislocations. p. 1208, W.B. Saunders, 1981.

"Why Blame the Obstetrician?"

POOOR obstetrical outcome, either from a maternal or a neonatal point of view, always raises the spectre of potential litigation in the current medico-legal environment. While some obstetrical practioners may indeed deserve blame, and though practice techniques certainly require constant self surveillance, often criticism is unjustly directed at physicians solely because of unexpected and undesirable results. Since major disability may occur in up to 1% of all deliveries, etiology must be carefully ascertained.¹

One of the reasons for unjust blame may be the common failure to look beyond the events of the birth process to the causes of adverse circumstances such as genetic, social and prenatal factors. Niswander, et al, concluded that fetal deaths ascribed to asphyxia and trauma, and very early neonatal seizures in babies born at term are valid indicators of obstetrical care, and that severe intrapartum distress must be acted upon promptly.² But, curiously, individual cases of cerebral palsy and other forms of adverse pregnancy outcome are in most cases unlikely to have been caused by suboptimal obstetric care as defined in that particular study. It was not valid to assume that every baby born in poor condition had been asphyxiated during labor or that he or she had received inappropriate obstetrical care. In 34 case-controlled infants with cerebral palsy no relationship was detected between suboptimal obstetric care and cerebral palsy when manifested at 18 months of age. Prenatal events, such as maternal bleeding, placenta previa and toxemia, have a higher correlation with subsequent cerebral palsy than hypoxia in labor and delivery. In another U.S. review cerebral palsy was found to have a prenatal etiology in 50% of the cases.³

Illingworth made the observation that "obstetricians have been blamed unjustifiably for causing brain damage, cerebral palsy, mental subnormality, congenital torticollis and facial palsy."⁴ Many maternal, genetic and anatomical problems often lead to clinical results which have been formally attributed to obstetrical

J. PATRICK LAVERY, M.D.

Associate Professor, Dept. OB/GYN, University of Louisville, Louisville, Kentucky 40292

mismanagement. Care must be given to a complete evaluation of the antenatal course and genetic history, as well as to full understanding of fetal pathology before conclusions can be drawn about inappropriate and particularly negligent care. As an example he noted the similar incidence of facial palsy in spontaneous deliveries (6.3%) and forcep deliveries (6.4%), though this condition is often "presumed" to be related to this particular type of obstetrical intervention.

Two important areas of information not used frequently enough to establish etiology of adverse obstetrical outcome are placental pathology and autopsy findings. Examination of the placenta at time of delivery should be performed and comments made about any deviation in development or structure. Many neonatal conditions have associated evidence of placental damage which correlates with chronic in-utero placental insufficiency and, hence, raises the possibility of chronic rather than acute damage to the fetus. All placentas coming from pregnancies associated with high risk conditions, episodes of fetal distress and anoxia, deliveries of small infants and particularly stillborn infants or those with an abnormal appearance, should be preserved for careful microscopic analysis.⁵ The problem of villitis of unknown etiology (VUE) and other vasculitides of the placenta are just now being appreciated as a cause of chronic placental insufficiency.⁶ Meconium staining, particularly of cord and membranes, may be of particular significance in dating insults further. Some antepartum injuries can occur to the fetus heretofore not completely appreciated. Problems such as intracranial hemorrhage, myocardial infarction, the sequelae of congenital infections

and in-utero meconium aspiration have been recently discussed by Paul et al.⁷ These injuries in the antenatal period can have major impact on fetal outcome and yet be totally separate from the labor process.

The autopsy findings from a stillborn or neonatal death may give further information about events contributing to the loss from other than the immediate perinatal period. Poor organ growth may suggest impaired placental function. Intracranial lesions, signs of infection, and other specific disorders may be appreciated on post mortem examination and thus elucidate factors contributory to the outcome that would not otherwise be appreciated. In Niswander's review only 30% of fetal deaths could be attributed to suboptimal care.²

It would be folly to suggest that birth injury does not occur, but it would be equally foolish

not to investigate all possible avenues in a search for critical antecedent events which may have contributed to an undesirable obstetrical event.

References

1. Taylor DJ. Do pregnancy complications contribute to neurodevelopmental disability. *The Lancet* i:713-716, 1985.
2. Niswander K, Elbourne D, Redman C, Henson G, et al. Adverse outcome of pregnancy and the quality of obstetric care. *The Lancet*, October, 827-831, 1984.
3. Holm VA. The causes of cerebral palsy. *JAMA* 247:1473-1477, 1982.
4. Illingworth RS. Why blame the obstetrician? A review. *British Medical Journal* 1:797-801, 1979.
5. Wigglesworth JS. *Perinatal Pathology*. W. B. Saunders, 1984.
6. Altshuler G. Placental infection and inflammation (Chapter 6) in *Pathology of the Placenta*, editor E.V.D.K. Perrin, Churchill Livingstone, 1984.
7. Paul RH, et al. Fetal injury prior to labor does it happen. *Am J Obstet Gynecol* 154:1187-1193, 1986.

President's Page

UNCOMPENSATED CARE

For the purposes of this discussion, I am using the term "uncompensated medical care" as that care provided by physicians with no expectation of receiving payment. I am not referring to the person who could well afford to pay his medical bill, but for various reasons, chooses not to, but I am referring to those who cannot pay for their medical care. Physicians enjoy a long tradition of providing medical care to the needy, without direction or instructions from third-parties which has recently become popular. The commonly accepted figures for the country are that approximately 30% of the physicians are participating physicians in Medicare, but on approximately 70% of Medicare claims assignment is accepted as payment in full.

The amount of the uncompensated medical care in the United States is entirely a matter of conjecture. Most physicians who are caring for a patient who is unable to pay do not keep any financial records. There is no object of sending bills, thus increasing one's overhead, to a patient who has no ability to pay. A recent attempt at a survey of the physicians in Lancaster County as to the amount of uncompensated care was sketchy at best and no conclusions can be drawn from this survey, in my opinion. A question was asked as to whether the physician would be willing to participate in an organized program. There were 25 positive replies, 9 negative replies and two undecided.

The AMA in a memorandum to state medical associations and county medical societies dated October 15, 1986, urged that a local program be developed to provide assignment for all low-income Medicare beneficiaries. Accompanying this memorandum was the program for the Bridgeport, Connecticut, Fairfield County area and another from Ohio, known as the Ohio Project Elderly Needy (OPEN). In addition to these two formal programs supplied by the AMA, I have reviewed numerous other formal programs as well as the national program set up by the ophthalmologists. I do not mean in any way to detract from any of these formal programs.



L. Dwight Cherry, M.D.

The Board of Directors of the Nebraska Medical Association considered this problem and referred it to the Commission on Association Affairs. Their report was presented to the House of Delegates and adopted by the House and I would like to quote two paragraphs from this. "The AMA proposal for local societies to develop formal programs asking physicians to accept assignment from Medicare beneficiaries whose economic situations dictate the need for this assistance was discussed. The Commission felt that in Nebraska most persons needing care receive it whether or not they can pay for it and that frequently it is better to render care to these people without fanfare in a public relations event. It was felt that this form of program is not needed in Nebraska and that all physicians should be urged to follow their consciences in the spirit of charity to their fellow man.

"We recommend the NMA membership continue to render care to all patients including Medicare patients with due charity and humility as in the past."

I heartily agree with the report of the Commission on Association Affairs and feel that nearly all of my fellow physicians in the State of Nebraska follow this concept, as they always have.

L. Dwight Cherry, M.D.
President



The Auxiliary

The 62nd Annual Meeting of the Nebraska Medical Association Auxiliary met at the Cornhusker Hotel in Lincoln, Nebraska April 27-28, 1987.

On April 27th the Auxilians attended the Medical Liability Session with the physicians followed by a workshop presented by Dr. & Mrs. Joseph Rogers titled "The Medical Marriage". They were very well attended and very informative.

Following lunch the Annual meeting was held with Bev Kruger, NMA Auxiliary president, presiding. Virginia Kutait, AMA Auxiliary Treasurer, brought greetings. After the meeting the Doctors Spouse Slide Show and the county posters were on display. This gave everyone an opportunity to share ideas and projects. Forty were in attendance at the meeting.

Many of the Auxilians attended the Fun/Sportsman Night. We all enjoyed the Johnny Ray Gomez "Stars of Tomorrow".

April 28 was the Awards Brunch preceeded by the Gavel Club. Wanda Shopp will be the presiding officer for the Gavel Club for 1987-88.

The Brunch was held at the University Club with 55 in attendance. Virginia Kutait, AMA Treasurer, from Ft. Smith, Arkansas gave us an overview of the AMA Auxiliary emphasizing the AMA white paper on Adolescent Health Education and the opportunity the Auxiliary has to assist the community and health providers to help our teenagers.

Virginia also installed the following officers: President Colleen Adam (Mrs. George); President-Elect Desta Osborne (Mrs. Robert); 1st Vice President Sally Becker (Mrs. William); 2nd Vice President Jeanette Schlichtemeier (Mrs. William); Recording Secretary Mona Damico, (Mrs. Charles); Corresponding Secretary Cindy Peterson, (Mrs. Gregg); Treasurer Barb Bohi, (Mrs. Daniel); Two year Directors Linda Brown, (Mrs. Elvin), and Kay Reed, (Mrs. John). Congratulations to all of you. It will be a great year.

Dr. Jerald Schenken, AMA Board of Trustees, spoke to us on the quality of medical care and maintaining good care for all patients in spite of the changes. Thanks for taking time from your busy schedule. Auxilian of the Year Award was presented to Helen Krause, Fremont. Merit Award was presented to Eleanor Ward of Omaha. The presidential award was given to Hall County and Cindy Peterson received this. Nebraska Medical Foundation awards were presented to Northeast and Lancaster County Auxiliaries. AMA-ERF awards were presented to Hall County, Southwest Nebraska, Burt-Washington, and Adams County Auxiliaries. Also Virginia Sittorius, member-at-large, for her donations in memorials. The county with the largest percentage increase in membership was Scottsbluff. Many gold stars to all of you for the outstanding work you have accomplished this year.

It has been a very rewarding year and we have started on a very successful year in 1987-88.

Bev Kruger

* * *

The following are reports submitted by Sally Becker, NMF Chairman, and Donna Stone, AMA-ERF Chairman, at the Annual Meeting in Lincoln on April 27, 1987. Both of these auxilians have accepted new positions in the Auxiliary next year. A special "thank-you" is extended to these ladies for their energetic fundraising efforts and tireless dedication to their respective foundations.

Colleen Adam,
NMAA President

NEBRASKA MEDICAL FOUNDATION, INC.

The Nebraska Medical Association Auxiliary has had a good year in their efforts to help fund the Nebraska Medical Foundation, Inc. Five county auxiliaries compared to four last year had fund raising projects for the Foundation. Those contributing were Adams: \$357.-

50; Buffalo: \$250.00; Lancaster: \$1919.92; Madison-Six Northeast: \$500.00; and MOMSA: \$575.00, for a total of \$3601.42, compared to \$2828.00 last year. Next year I am sure yet more counties will be added in helping to support the Foundation.

The year end report of the Foundation reports continued assistance to medical students by providing loans during their training. A student in financial need is permitted to borrow \$2500.00 during each year of training. During 1986 approved loans totaled \$23,750.00 to medical students at Nebraska's two medical schools. The current balance of outstanding loans to students still in training is \$58,700.00; and the balance of loans currently under repayment by individuals who have completed medical school training is \$292,673.93.

The Foundation continues to make available financial support through its Student Research Scholarship Program by issuing one \$2000.00 scholarship to each medical school. One student from each school is presented a \$1000.00 scholarship check during the Annual Session and the second \$1000.00 payment is given to the student when report of the research project is received.

Tumor Registry State-Wide: Representatives of the State Department of Health, the NMA/NMF, and the Howard Hunt Tumor Registry/Methodist Hospital have been meeting to finalize the agreement under which the Nebraska Tumor Registry Program will function. The Nebraska Medical Foundation has pledged \$20,000.00 toward the first year operation as a one-time contribution. This unique private/public relationship will insure the registry program in Nebraska will be standardized using the basis for function the program developed by the NMA Ad-Hoc Committee on tumor registry funded by the Foundation.

During 1986-87, physicians contributed more than \$10,000.00 and the auxiliary more than \$3000.00 to the Nebraska Medical Foundation, Inc. The Foundation's board of directors greatly appreciate these contributions and request and encourage our continued support.

Sally Becker, NMF Chairman
Nebraska Medical Association Auxiliary

NEBRASKA MEDICAL ASSOCIATION AUXILIARY AMA-ERF COMMITTEE April 27, 1987

Another fund-raising year has come to a close and it is time to tally the results and extend our warmest thanks to those who worked so long and hard to further excellence in medical education.

Thanks to our efforts plus contributions from physicians and spouses in states other than ours, the following amounts have been presented to the University of Nebraska Medical Center and Creighton University School of Medicine:

UNMC ...	\$5394.10
	\$7219.30 — medical school
Creighton. ...	\$2977.97
	\$9192.50 — medical school
TOTAL	\$12,170.47

From April 15, 1986 to April 15, 1987 the NMAA has contributed \$6244.10 to AMA-ERF from a variety of fund-raisers. I am particularly pleased to report that three groups prepared Holiday Sharing cards: Adams County, MOMSA and Lancaster County. We hope this will greatly increase next year.

County area totals are as follows:

Adams County	\$519.80
Buffalo County	\$500.00
Burt-Washington Counties	\$180.00
Dodge County	\$100.00
Hall County	\$519.88
Lancaster County	\$2542.95
Lincoln County	No report
MOMSA	\$1291.91
Northeast Nebraska	\$300.00
Scottsbluff County	No report
Southwest Nebraska	\$118.92
Western Quad	\$105.64
Members-At-Large (Virginia Sittorius)	\$65.00

May this coming year be even better as we pursue our quest for the best.

Donna Stone,
Chairman,
AMA-ERF Committee
NMAA

MEDICAL SCHOOL NEWS

CREIGHTON, UNMC ANNOUNCE JOINT PSYCHIATRY PROGRAM

The Creighton University and the University of Nebraska Medical Centers have announced plans to form a joint psychiatry program.

The joint program will integrate the two medical center's teaching, research and psychiatric service programs. The merger will take place on July 1, although the integration of all services and programs will occur over a period of time, officials for the two medical centers said.

The joint psychiatric program is being created under the auspices of the Creighton-Nebraska Universities Health Foundation. The non-profit foundation was formed in 1971 to provide a corporate administrative vehicle for certain cooperative activities of Creighton University and UNMC.

"This is an excellent example of how private and public institutions can work together in the public interest and in ways that enhance academic programs while simultaneously better serving the needs of the Omaha community and Nebraska. It also shows how a private institution such as Creighton can be an important public resource," said Dr. Richard L. O'Brien, Creighton vice president for health sciences.

Under the joint program, most services and programs eventually will be located at the Saint Joseph Center for Mental Health. The center is the primary teaching hospital for the Creighton University Medical Center's psychiatry program.

Dr. Frank J. Menolascino, chairman of the University of Nebraska Medical Center (UNMC) Department of Psychiatry since 1985, will head the joint program. Prior to that, he served as vice chairman for the department for 12 years.

"This is another example of how UNMC and Creighton University are identifying ways to join forces in improving health care and medical education while decreasing costs," said Dr. Robert Waldman, dean of the UNMC College of Medicine.

One of the most important phases of the transition into a joint program will be the

combination of the campuses' two existing psychiatric residency programs or post-graduate specialty education programs for physicians, Drs. O'Brien and Waldman said. The joint program will offer a residency in adult psychiatry and a fellowship training program in child and adolescent psychiatry.

A class of residents recruited to begin in July 1988 will be the first group of residents to participate in the combined program.

Drs. O'Brien and Waldman said the joint program also will enhance the medical centers' research by creating more opportunities between Creighton and UNMC faculty.

In addition, patients will benefit through an increased efficiency in health care delivery that will be made through the joint program, they said.

Drs. Waldman and O'Brien said Dr. Menolascino was chosen to direct the joint program on the basis of his academic credentials and previous experiences.

Dr. Menolascino, a member of the UNMC faculty since 1963, was appointed a professor of psychiatry in 1971 and associate director of the Nebraska Psychiatric Institute in 1975. He is a 1957 graduate of the UNMC College of Medicine.

He has won numerous national and international awards from such organizations as the American Psychiatric Association, the President's Committee on Mental Retardation, and the World Psychiatric Association. He is a past president of the Association for Retarded Citizens of the United States and is currently a section president of the World Psychiatric Association.

He has helped to initiate nationally recognized programs of excellence in community-based services for both the mentally ill and the mentally retarded in Nebraska. In 1976 he received the Strecker Award as the Outstanding Psychiatrist in America from the American Psychiatric Association and the Hibbs Award for excellence in research contributions to psychiatry from the American Psychiatric Association in 1985.

**HONOR SOCIETY MEMBERS
CHOSEN AT
CREIGHTON SCHOOL OF MEDICINE**

Twenty-two people have been initiated this spring into the Alpha Omega Alpha Honor Medical Society at Creighton University.

The new members were chosen by the society for their scholarship, personal honesty and leadership or potential leadership roles in the field of medicine.

Those joining the society include Dr. Marcus DeWood of Spokane, Wash., a 1974 graduate of the School of Medicine; Dr. William Schlueter, a Creighton assistant professor of medicine; and Dr. Laurel Preheim, a Creighton associate professor of medicine.

Nineteen students also were accepted into the society. They include Victoria Barak Armbruster of Omaha; Heidi Birkholz of Rapid City, S.D.; Paul Braaton of Denver, Colo.; Mark Brooks of Brunsville, Iowa; Robert Coleman of Omaha; Jeffrey Dungan of New Rockford, N.D.; Scott Fletcher of Omaha; Grace Koley of Omaha.

Kenneth Morhain of La Vista, Neb.; James O'Neil of Aurora, Ill.; Shawn Palmer of Council Bluffs, Iowa; Thomas Schmitz of Omaha; Stanley Smith of San Marino, Calif.; Michael Thakor of Bismarck, N.D.; Barbara Thomas of Joliet, Ill.; Mark Heibel of Norfolk, Neb.; Michael Litman of Maitland, Fla.; Ellen McCarthy of Kansas City, Kan.; and Mark Mountford of Port Orchard, Wash.

Welcome New Members

John D. Deck, M.D.
Box 81009
Lincoln, NE 68501

Ansar Khan, M.D. (reinstated)
450 E. 23rd
Fremont, NE 68025

Dennis F. Landers, M.D. (reinstated)
Dept. of Anesthesiology
UNMC - 42nd & Dewey
Omaha, NE 68105

Carl J. Pergam, M.D. (reinstated)
622 Doctors Bldg.
Omaha, NE 68131

Kelly Nicholes, M.D.
P.O. Box 427
Beatrice, NE 68310

Jon S. Berlin, M.D.
P.O. Box 2113
Kearney, NE 68847

Gary S. Shera, M.D. (reinstated)
2737 No. 49th St.
Lincoln, NE 68504

John P. Prusmack, M.D.
Bergan Mercy Hospital
Omaha, NE 68124

Jeffrey L. Edwards, M.D.
401 Doctors Bldg.
Omaha, NE 68131

John B. Sikes, M.D.
401 Doctors Bldg.
Omaha, NE 68131

Mark C. Pinkerton, M.D.
401 Doctors Bldg.
Omaha, NE 68131

Coming Meetings

NMA FALL SESSION — September 10-12, 1987, Cornhusker Hotel.

NMA ANNUAL SESSION — April 29-May 2, 1988, Omaha Marriott.

NMA FALL SESSION — September 22-24, 1988, Cornhusker Hotel.

UNIVERSITY OF NEBRASKA MEDICAL CENTER

SPORTS MEDICINE UPDATE 1987 — July 5-9, 1987 at the Jackson Hole Racquet Club, Jackson, WY. Sponsored by the Department of Orthopaedic Surgery and Rehabilitation, UNMC.

CARDIOVASCULAR DISEASE PREVENTION IN THE YOUNG AND THE ADULT — August 2-5, 1987 at the Snowmass Club, Snowmass, Colorado. Sponsored by UNMC.

UNIVERSITY OF NEBRASKA COLLEGE OF MEDICINE ALUMNI ASSOCIATION — JOHN S. LATTA CENTENNIAL LECTURESHIP — August 27-28, 1987, UN Medical Center Campus, Omaha, Neb. EVERYONE INVITED.

UNIVERSITY OF NEBRASKA COLLEGE OF MEDICINE ALUMNI ASSOCIATION — ALUMNI COCKTAIL RECEPTION — Tuesday, September 15, 1987, 5:30 to 7:00 p.m. — Fairmont Hotel, San Francisco, Calif. — in conjunction with the American Academy of Family Physicians meeting. All alumni, spouses and friends are invited. Hors D'oeuvres and Cash Bar.

EMERGENCY MEDICINE REVIEW — September 21-26, and October 5-10, 1987 at the Center for Continuing Education, UNMC, Omaha, NE 45 hours of ACEP Category I credit and 45 prescribed hours by the AAFP and AMA Category I.

UNIVERSITY OF NEBRASKA COLLEGE OF MEDICINE ALUMNI ASSOCIATION — ALUMNI ROUNDUP AND RECEPTION in Omaha — Monday, October 26,

1987, 6-7:30 p.m., Red Lion Inn Ballroom — in conjunction with the Omaha Mid-West Clinical Society Postgraduate Assembly. Hors D'oeuvres and Cash Bar. All alumni, spouses, faculty, friends and students are cordially invited. Followed at 7:45 p.m. with 50-year Dinner honoring the CLASS of 1937 - Nebraska Room, Red Lion Inn. CLASS REUNIONS will be held October 25 and October 27 for classes ending in "7" and "2".

For further information or to register for the above courses contact: Marge Adey or Brenda Ram, Center for Continuing Education, University of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, Nebraska 68105. Telephone (402) 559-4152.

UPCOMING UNMC CONTINUING EDUCATION COURSES

ADVANCED TRAUMA LIFE SUPPORT — March 23-24, May 28-29, September 28-29, 1987. Omaha, Nebraska. Fee: \$475. 17.0 Hours AMA Category I. 17.0 Prescribed Hours AAFP. 17.0 Hours ACEP Category I. For further information on these three courses contact Cindy S. Hanssen, University of Nebraska Medical Center, Center for Continuing Education, 42nd & Dewey Avenue, Omaha, Nebraska 68105-1065. Phone (402) 559-4152. In Nebraska, call: 800-228-1095. All other states, call: 800-228-9630.

For further information, contact Ann Fitzgerald, University of Nebraska Medical Center, Center for Continuing Education, 42nd & Dewey Avenue, Omaha, Nebraska 68105-1065. Phone (402) 559-4152. In Nebraska, call: 800-228-1095. All other states (except Alaska), call: 800-228-9630.

CREIGHTON UNIVERSITY

PEDIATRIC RHEUMATOLOGY — August 6-8, 1987, The Boys Town National Institute, Omaha, Nebraska. Program Director:

James T. Cassidy, M.D. Fee: TBA. Credit Hours: TBA.

HYPERTENSION: YESTERDAY, TODAY & TOMORROW — August 15, 1987, Aksarben, Omaha, Nebraska. Program Director: Syed M. Mohiuddin, M.D. Fee: \$15 advanced registration; \$25 day of conference - 4 credit hours Category 1.

LASER LAPAROSCOPY & HYPERTENSION WORKSHOP — August 28-29, 1987, Criss Building, Creighton University School of Medicine. Program Director: Thomas S. Pruse, M.D. Fee: \$550 - 14 Cognates ACOG.

FAMILY MEDICINE UPDATE — September 5-6, 1987, The Lodge at Okoboji, Fee: TBA. Credit Hours: TBA.

AMERICAN MEDICAL WOMEN'S ASSOCIATION REGIONAL CONFERENCE — September 19-20, 1987, Holiday Inn Central, Omaha, Nebraska. Program Coordinator: Rose Faithe, M.D. Fee: TBA, Credit Hours: TBA.

A DAY WITH THE PERINATOLOGISTS — September 25-26, 1987, Red Lion Inn, Omaha, Nebraska. Program Director: Washington C. Hill, M.D. Fee: TBA, Credit Hours: TBA.

CONTROVERSIES AND CLINICAL MANAGEMENT IN HIGH RISK OBSTETRICS — October 29-31, 1987, Claremont Resort Hotel, Oakland, California. Program Director: Washington C. Hill, M.D. Fee: \$350 for physicians, \$240 for nurses and residents if paid before Sept. 29. 16.5 credit hours Category 1.

VISITING PROFESSOR SCHEDULE — 1987

September 11-12, 1987

John Cameron, M.D., Surgeon-in-Chief, The John Hopkins University, Department of Surgery, Baltimore, Maryland.

October 23-24, 1987

Hiram C. Polk, Jr., M.D., Professor and Chairman, Department of Surgery, University of Louisville, School of Medicine, Louisville, Kentucky.

For further information or to register, contact: Creighton University School of

Medicine Division of CME, Omaha, NE 68178, 402-280-2550 or outside Nebraska Toll free 800-228-7212, Ext. 2550. The Creighton University School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.

UNIVERSITY OF COLORADO SCHOOL OF MEDICINE Summer and Fall 1987

"THE PITUITARY IN ASPEN" — July 9-11, 1987, Given Institute of Pathobiology, Aspen, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

TWENTY-THIRD ANNUAL INTERNAL MEDICINE PROGRAM—July 12-17, 1987, YMCA of the Rockies, Estes Park, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

DYNAMIC PSYCHOTHERAPY: THE THERAPEUTIC BOND — July 27-31, 1987, Given Institute of Pathobiology, Aspen, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

PEDIATRIC SPORTS MEDICINE - NORTH AMERICAN SOCIETY OF PEDIATRIC EXERCISE MEDICINE (NASPEM) — July 31 - August 2, 1987, Given Institute of Pathobiology, Aspen, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

THIRTIETH ANNUAL PEDIATRIC PROGRAM — August 3-6, 1987, Given Institute of Pathobiology, Aspen, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

THIRTEENTH ANNUAL PRIMARY CARE ORTHOPEDICS — August 6-11, 1987, Given Institute of Pathobiology, Aspen, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

PERINATAL MEDICINE CONFERENCE — August 7-10, 1987, Snowmass Conference Center, Snowmass Village, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

ASPEN BASIC SCIENCE: RECEPTORS AND DISEASE — August 12-15, 1987. Given Institute of Pathobiology, Aspen, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

RENAL DISEASE FOR THE INTERNIST AND NEPHROLOGIST — August 17-21, 1987, Given Institute of Pathobiology, Aspen, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

FIFTH ANNUAL INTERNAL MEDICINE BOARD REVIEW — August 24-28, 1987, Denver, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

FAMILY PRACTICE REVIEW — October 5-10, 1987, Denver, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

AMERICAN FRIENDS OF THE HEBREW UNIVERSITY

HEBREW UNIVERSITY TO OFFER SUMMER MEDICAL COURSES — Jerusalem, July 5 to July 28, 1987. For the first time

ever, the Hebrew University of Jerusalem will offer summer courses this year taught in English for physicians and medical students from overseas. Two courses are being offered — one in ethical and legal problems in modern medicine from a Jewish perspective and the other in medical problems specific to the Jewish people. The courses are offered by the Hebrew University-Hadassah Medical School in conjunction with the University's Rothberg School for Overseas Students. The courses will be Overseas Students. Deadline for application is May 15, 1987. For an application and further information, contact the Office of Academic Affairs of the Rothberg School for Overseas Students at 11 East 69th Street, New York, NY 10021, telephone (212) 472-2288.

UNIVERSITY OF KANSAS

For information concerning the following continuing education offerings sponsored by the University of Kansas Medical Center contact: Carole Rosen, Promotions Coordinator, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Boulevard, Kansas City, KS 66103 (913) 588-4480.

INTEROPERATIVE RADIATION: A NEW COMBINED TREATMENT APPROACH TO CANCER — July 18, 1987. Sponsored and held at by the University of Kansas Medical Center, Kansas City, Kansas. Credit: AMA, AAFP, CNE. Contact: Eileen Buttrick, University of Kansas Medical Center Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103 (913) 588-4480

NUTRITION CONCERNS FOR WOMEN: A SYMPOSIUM FOR HEALTH PROFESSIONALS — September 25, 1987. Sponsored by the University of Kansas Medical Center, Kansas City, Kansas. Credit: AMA, AAFP, CNE, ADA. Contact: Eileen Buttrick, University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103, (913) 588-4480.

ALLERGY, IMMUNOLOGY AND RHEUMATOLOGY: REVIEW AND UPDATE — October 9-10, 1987 at the University of Kansas Medical Center. Sponsored by the University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103. Credit: Category I AMA, AAFP. Contact: Eileen Buttron, University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103, (913) 588-4480.

MEDICINE AND RELIGION: ISSUES IN THE EIGHTIES — October 20-21, 1987 to be held at Kansas City, Kansas. Sponsored by University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103. Credit: AMA, AAFP, CNE, SW, Clergy. Contact: Eileen Buttron, University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103, (913) 588-4480.

**NATIONAL JEWISH CENTER FOR
IMMUNOLOGY AND
RESPIRATORY MEDICINE**

NATIONAL JEWISH CENTER FOR IMMUNOLOGY AND RESPIRATORY MEDICINE KEYSTONE SUMMIT — February 3-7th, 1988 at Keystone Colorado. A tribute to: Richard Farr, M.D. Topics: Allergy, Asthma, Pharmacology, Advances in Immunology, Diagnostic Testing and more. Registration fee: \$325.00 — \$165.00 for Allied Health and Physicians in Training. 16.5 hours of AMA Category 1 Credit. For brochure and more information contact: Jeri Wagner, National Jewish Center for Immunology and Respiratory Medicine, 1400 Jackson Street, Denver, CO 80206, 303-398-1000.

In Memoriam

*By medicine life may be prolong'd
yet death*

Will seize the doctor too.

—Shakespeare

NANCY CATANIA, M.D. (Born April 8, 1903 - died April 12, 1987) Medical Specialty — Obstetrics & Gynecology. Doctor Catania was a graduate of the University of Nebraska College of Medicine in 1926 and practiced in Omaha. She was a member of the Nebraska Medical Association and the American Medical Association. Survivors include sisters Annunciata Moberg of El Cajon, CA, Anne Trout of Omaha, Rose Marie James and Salley Wagner, both of Yakima, Washington, and Alpha Jean Painter of Arlington, Virginia.

SAMUAL E. SWENSON, JR., M.D. (Born January 14, 1917 - died March 15, 1987) Medical Specialty — General Surgery. Doctor Swensen was a graduate of the University of Nebraska College of Medicine in 1941 and practiced in Omaha. He was a member of the Nebraska Medical Association and the American Medical Association. Survivors include his wife, Barbara, of Omaha; daughters, Margaret Chainski and Barbara Maes, both of Chicago, and Mary Karin Nilsson of Omaha; a sister, Margaret Wolcott of Escondido, CA; and three grandchildren.

JOSEPH M. HORWICH, M.D. (Born April 10, 1913 - died March 18, 1987) Medical Specialty — General Practice. Doctor Horwich was a graduate of the University of Nebraska College of Medicine in 1937 and practiced in Omaha. He was a member of the Nebraska Medical Association and the American Medical Association. He is survived by his wife, Bernice, sons, Allan of Chicago and John of Milwaukee; sisters, Mollie Wohlner and Bess Rothenberg, both of Omaha; and six grandchildren.

WILLIS D. WRIGHT, M.D. (Born June 5, 1905 - died March 25, 1987) Medical Specialty — Internal Medicine. Doctor Wright was a graduate of the University of Nebraska College of Medicine in 1931 and practiced in Omaha. He was a member of the American Medical Association, the Nebraska Medical Association and served as President of the Nebraska Medical Association in 1965-66. He is survived by his wife, Dorothy; two sons, Frederick of Omaha and Willis, Jr. of Marion, Ohio; and sister, Madge Whisenant of Santa Cruz, CA.

REPORTS OF OFFICERS, DELEGATES AND COMMITTEES

ANNUAL SESSION

April 26 and 28, 1987

(These reports appear as originally submitted. For the House of Delegates deliberations, possible changes, and final action, refer to the minutes which follow these reports.)

REPORT OF THE BOARD OF DIRECTORS

Hiram R. Walker, M.D., Kearney - Chairman; L. Dwight Cherry, M.D., Lincoln; Francis D. Donahue, M.D., Omaha; Robert F. Shapiro, M.D., Lincoln; Donald J. Pavelka, M.D., Omaha; Richard Raymond, M.D., O'Neill; Paul E. Collicott, M.D., Lincoln; Alvin A. Armstrong, M.D., Scottsbluff; Richard Meissner, M.D., Omaha; Stanley M. Truhlsen, M.D., Omaha.

The Board of Directors presents the following report to the House of Delegates.

1. **MEDICARE** - During the 1986 Fall Session the House of Delegates adopted a resolution which directed the Association to develop a procedure to document problems, and that an effective working liaison with the Medicare Carrier/fiscal agent be developed. An Ad-Hoc Committee was appointed and following several educational sessions a meeting was held with representatives of Blue Cross/Blue Shield of Iowa/Medicare present, as was a representative of the HCFA office in Kansas City. Items discussed included the need for additional educational sessions for physicians and staff, coding errors, delays in payment, inconsistent reimbursement for specific procedures, MAAC, communication problems, the need for Blue Shield to educate the recipients regarding benefits, the definition of a "clean" claim, the function of the program integrity division, telephone etiquette, and the provision of toll-free lines for physicians. The NMA's Ad-Hoc Committee included three business managers/office managers from physicians offices.

During the meeting with representatives of Iowa Blue Shield/Medicare, specific coding and processing problems were discussed. In addition, physician profile establishment was reviewed, and the subject of percentage reimbursement of participating versus non-participating physicians was addressed.

The Ad-Hoc Committee considered which of several alternatives could best establish communication between Iowa Blue Shield/Medicare and Nebraska physicians regarding questions and problems currently being experienced. Consideration was given to inviting representatives of Iowa Blue Shield to be present during the Annual Session for purposes of discussing specific problems with physicians. It was decided that greater benefit could be achieved should Iowa Blue Shield agree to scheduling several educational sessions across the state at which physicians and office personnel could be present to address specific problems being encountered. The Iowa Blue Shield representatives agreed to this approach and the sessions will be scheduled shortly. It is anticipated the Ad-Hoc Committee will continue to function in this very important area of liaison with the Medicare intermediary.

2. **YOUNG PHYSICIANS** - The Board appointed an Ad-Hoc Committee on Young Physicians for the purpose of discussing the involvement of young physicians in organized medicine, and the possible development of a permanent commission on young physicians or a section of young physicians. The Ad-Hoc Committee has held an initial meeting and discussed the subjects of participation,

membership statistics, the association's dues structure, and the advisability of scheduling several sessions in the state for young physicians. It is anticipated the sessions will be scheduled following the Annual Session and will include presentations of a socio-economic nature which would inform these practitioners of the Nebraska Medical Association's broad range of involvement in matters affecting the practice of all physicians, including those age 40 or younger. The Board will meet in the near future and consider the specific recommendations that are being developed by the Ad-Hoc Committee on Young Physicians. It is anticipated that follow-up reports with recommendations will be submitted to the House of Delegates by the Board.

3. **THIRD PARTY/HOSPITAL CONTRACTS** - The Board discussed a resolution which was passed at the 1986 Fall Session directing the Association to study the policies and practices of third party carriers and develop a policy statement defining our professional opinion on these policies and practices for consideration at this session of the House of Delegates. This matter was referred to the Ad-Hoc Committee on Health Policy Statements for development of an NMA position on this issue.

4. **MOTORCYCLE HELMET LEGISLATION** - During the 1986 Fall Session the House of Delegates adopted two resolutions calling on the Association to support legislation which would require the wearing of helmets while operating or riding on motorcycles and all terrain vehicles. This matter was referred to the Commission on Legislation and Governmental Affairs who adopted the position that this legislation be supported in the 1987 session of the Nebraska Legislature. The bill requiring motorcycle helmet use, LB 428, was supported. As this report is being prepared, the bill is on General File in the Nebraska Legislature. It will be held over for consideration in the 1988 Legislative Session.

5. **DPT VACCINE** - At the 1986 Fall Session of the House of Delegates the subject was discussed with the aspect of increased cost and the lack of funds available for the program given primary emphasis. The Board referred this matter to the NMA Ad-Hoc Committee on Maternal and Child Health for its consideration and appropriate action.

6. **AMA MEDICARE ASSIGNMENT PROPOSAL** - The Board received correspondence from the President of the American Medical Association which recommended consideration be given to the development of local programs to encourage accepting assignment for all low income Medicare beneficiaries. The Board of Trustees of the AMA has asked physicians to continue to accept assignment for Medicare beneficiaries whose economic situation dictated the need for this type of assistance. Inasmuch as the AMA is asking the medical associations to take the lead in developing formal programs at the local level, this matter was referred to the NMA Commission on Association Affairs for its consideration.

7. **SEATING OF ADDITIONAL NMA DELEGATES** - The Board considered the subject of members holding more than one office in the Association, i.e., Delegate to NMA, and Delegate to AMA. It was felt that representation by various elected individuals should be considered in detail, consequently this matter was referred to the Commission on Association Affairs for its deliberation and recommendation.

8. **AMA DELEGATES AND ALTERNATES** - The NMA has been awarded an additional seat in the AMA House of Delegates due to the fact that 75% of the

members of the NMA are also members of the American Medical Association. This will be the situation for both meetings of the AMA House of Delegates during the calendar year 1987. In addition, as of December 31, 1986, AMA statistics indicate that the Nebraska Medical Association has an AMA membership of 2,018 which includes dues paying and dues exempt members. This being the case, the Association gains a third regular Delegate in the AMA House. The Board has recommended that the two NMA Alternate Delegates to the AMA serve in the Delegate positions for the 1987 AMA House of Delegates Sessions thus resulting in the NMA having four Delegates as awarded by the AMA. Because of the very close numerical requirements currently being achieved by the NMA, the Board's recommendation is that the President, President-Elect, and Secretary-Treasurer serve as Alternate Delegates during calendar year 1987. The Board has adopted a motion that this proposal be considered by the Board at its November, 1987 meeting, and if the NMA continues to achieve the additional Delegate status a recommendation be considered which would alter the temporary process and consequently elect additional Alternate Delegates to the AMA House.

9. **NON-DUES INCOME** - The Board selected a sub-committee to explore additional sources of non-dues income that might be available to the Association. The Association currently generated non-dues income from sources such as its administrative services provided to specialty societies, and endorsement of the Blue Cross/Blue Shield coverage package and the I.C. Systems collection agency. The sub-committee has reported to the Board that it is nearing completion of an arrangement whereby the NMA would sponsor a Credit Card which would be made available to NMA members for their use. Revenue generated would be based on sales volume charged by the individual members. The Board's opinion is that such income could be very beneficial to the Association, having a direct influence on the size and frequency of future dues increases. Also under study is whether the Association should establish a for-profit corporation to handle the situation of non-dues income. The sub-committee is also reviewing various other services that would be beneficial to Association members while benefiting the organization through the generation of non-dues income.

The Board recommends that it be given authorization to continue in this endeavor, finalizing the various agreements that are necessary to implement programs and services it feels are worthwhile.

10. **HONORARY MEMBERSHIP** - The House of Delegates is aware that the 1987 Annual Session is dedicated to our longstanding former Executive Director, Kenneth E. Neff. In recognition of his many years of service, the Board has unanimously approved granting honorary membership to Mr. Neff. The presentation will take place during the Monday evening banquet on April 27. The Board recommends that the House endorse the provision of an honorary membership to Mr. Neff.

The Board presents this report to the House of Delegates and stands ready to address items of business that may be referred to it during this Session.

REPORT OF THE DELEGATE TO THE AMA

The 1986 Interim Session of the AMA House of Delegates met in Las Vegas, Nevada December 7th through December 10th.

The proceedings were overshadowed by the Federally mandated MAAC (Maximum Allowable Actual Charge)

edict and the receipt of information that the administration intended to push for DRG's for physicians in the new budget proposal. Hundreds of phone calls from delegates, alternates, and state and specialty society representatives were made to Republican Members of Congress and to the White House attempting to get this portion of the budget proposal changed prior to its final approval on December 10th or 11th. Inclusion of all physicians under DRG's was altered subsequently to include only the hospital based specialties of Radiology, Pathology and Anesthesiology. There was unanimous support for the AMA's position articulated by Dr. James Sammons, the AMA EVP, stating that the inclusion of the physicians under DRG's regardless of specialty and type of practice was totally unacceptable and the AMA pledged to wage all out war with the government over any such action.

The information provided by the AMA for contacting members of the Congress was as follows:

ARGUMENTS AGAINST PHYSICIAN DRG'S

- Combining payments to physicians and hospitals based on the DRG system would significantly undermine the role of the physician as the patient's advocate.
- There is already a growing concern that the DRG system encouraged inappropriate early discharges and limitations on services. A widely released AMA survey indicated that physicians feel pressured under Medicare regulations to release patients from hospital care before it is medically appropriate. **Placing physicians' reimbursement under hospital control will only increase this pressure.**
- The DRG proposal is designed to reduce government payments to purchase physician services by \$11 billion in five years. Common sense can predict that some needed services will be jeopardized, such as physician consultations — critical for patients with multiple illnesses — and some complex physician diagnostic services.
- Administratively, this is a nightmare: How will the hospital be able to determine the appropriate reimbursement for several physicians treating an individual patient? No significant data is available to determine an **average** use of services for medical conditions.

Plans were formulated and advice given as to the best way to address the MAAC problem, and this information was transmitted to the state and specialty society leadership.

Needless to say, the atmosphere was one of a profession under siege.

In his presidential address, John Coury, M.D., encouraged physicians not to compromise quality in the care of patients in spite of increasing governmental pressures. He urged the profession to get behind the recommendations of the AMA's Health Policy Agenda (which was released in late February, 1987), continue to support true Peer Review, and to push legislation for meaningful tort reform.

1. The following Commendation Resolution was submitted by the Nebraska Delegation for our retiring Executive, Ken Neff:

Whereas, Kenneth E. Neff, the esteemed Executive Director of the Nebraska Medical Association, will retire January 1, 1987, after having served the medical profession of his state, the Federation and the entire

physician population of this nation for over 33 years; and

Whereas, Mr. Neff served his State Association as organizer, peacemaker, strategist and lobbyist with distinction; and

Whereas, He displayed his managerial and organizational skills in a quiet and dignified manner; and

Whereas, Mr. Neff has been a staunch supporter of private practice and a vigorous opponent of government intrusion into the private practice of medicine; and

Whereas, The Nebraska Medical Association has dedicated its 1987 Annual Session to this citizen extraordinaire; therefore be it

RESOLVED, That the House of Delegates of the American Medical Association acknowledge the countless contributions of this dedicated and devoted friend of American medicine; and be it further

RESOLVED, That the House of Delegates of the American Medical Association commend Kenneth E. Neff and his wife, Ida Neff, for their years of dedicated and faithful service to the practice of medicine and to the physicians of Nebraska and the nation.

2. Nebraska's Resolution #7 requesting the AMA to use all appropriate means, including court action if necessary, to end the blatant discriminations against senior citizens and the medical profession under Medicare, was referred to the Board of Trustees for action.

3. Resolution #1 called on the AMA to declare a "National Day of Mourning" for the loss of the right to contract between Massachusetts physicians and their Medicare patients. This refers to the measure passed by the Massachusetts Legislature that requires Massachusetts physicians to accept assignment on all Medicare patients in order to be licensed in the state. The following substitute Resolution #1 was adopted:

Resolved, That the American Medical Association continue to pursue with the Massachusetts Medical Society judicial or legislative relief from the violation of traditional principles of the licensure process through mandating Medicare assignment as a condition of licensure; and be it further

Resolved, That the AMA assist other state medical societies to prevent the adoption of similar legislation in other states; and be it further

Resolved, That the AMA immediately inform the public through appropriate means and in cooperation with other appropriate parties of the ways in which such legislation interferes with physician-patient contractual relationships and access to quality medical care.

4. Resolution #12 from the Florida Delegation proposed that the AMA organize and coordinate a mass rally and legislative meeting in Washington, D.C. in 1987 for the purpose of influencing the passage of favorable tort reform legislation.

The reference committee was impressed by testimony that such a rally might well have negative effects and the House agreed in not adopting this resolution.

One can understand the frustration of physicians in dealing with the multiplicity of perceived injustices facing the profession and the Florida situation with respect to the professional liability crisis has to be the worst in the nation.

5. Late Resolution #143 which directed the AMA to take whatever steps are necessary to obtain injunctive relief to enjoin the implementation of the Medicare Part B fee provisions of the OBRA Budget Reconciliation Act of 1986 was adopted. (A temporary injunction was obtained in the state of Texas and legal action in this regard is continuing.)

6. Report BBB of the Board of Trustees which presented a review of the 150 changes in the Medicare program contained in the OBRA legislation and outlined plans for dealing with some of the more onerous changes.

7. Report KK of the Board of Trustees was approved. This report informed the House of Delegates that draft legislation had been prepared which would amend the Social Security Act to afford physicians the right to judicial review before PRO sanctions can be imposed upon them.

8. Resolution #14 which called on the AMA to have legislation introduced in Congress which would mandate all employers offering health benefit plans to offer medical insurance covering traditional fee-for-service medical care as one option and to encourage all states to introduce similar legislation was approved.

9. Substitute Resolution #17 was approved as follows:

Resolved, That the American Medical Association continue to support the voluntary time-honored practice of physicians providing drug samples to selected patients at no charge; and be it further

Resolved, That the AMA reiterate that samples of prescription drug products represent valuable benefits to the patient; and be it further

Resolved, that the AMA continue to support the availability of drug samples directly to physicians through manufacturers' representatives and other means, with appropriate safeguards to prevent diversion; and be it further

Resolved, That the AMA endorse sample practices that:

1. preclude the sale, trade or offer to sell or trade prescription drug samples,
2. require samples of prescription drug products to be distributed only to licensed practitioners upon written request, and
3. require manufacturers and commercial distributors of samples of prescription drug products and their representatives providing such samples to licensed practitioners to
 - (a) handle and store samples of prescription drug products in a manner to maintain potency and assure security,
 - (b) account for the distribution of prescription drug samples by maintaining records of all drug samples distributed, destroyed or returned to the manufacturer or distributor, and
 - (c) report significant thefts or losses of prescription drug samples.

10. Substitute Resolution #34 was approved as follows:

Resolved, That the American Medical Association reiterate existing policy supporting 0.05 percent blood alcohol content as per se illegal for driving and urge incorporation of that position in all state drunk-driving laws.

11. Amended Resolution #121 regarding the deducti-

bility of interest on student loans was approved as follows:

Resolved, That the American Medical Association monitor the impact of the elimination of the tax deductible status of interest paid on student educational loans; and be it further

Resolved, That the AMA support the principle that interest on student educational loans should remain tax deductible; and be it further

Resolved, That the AMA seek a legislative remedy to the portion of the 1986 Tax Reform Act that eliminated the deduction of the interest on educational loans.

12. Action on Resolution #6 regarding the development of an AMA section for Foreign Medical graduates is as follows:

Resolution 6 referred to Board of Trustees with the request that the Board of Trustees develop a plan of action intended to increase the active involvement and membership of foreign medical graduates in the AMA, with the formation of a section as an option.

13. Report L of the Council on Medical Service was approved in lieu of Resolutions 41, 76 and 137. Resolution 140 was adopted.

Report L of the Council on Medical Service recommended that (1) federal legislation be drafted providing that a PRO not notify a beneficiary of a PRO determination that the quality of medical services provided does not meet professionally recognized standards of health care until the cited practitioner has obtained a timely PRO reconsideration of the determination and exhausted rights to judicial review of any adverse reconsideration decision; (2) HCFA policy transmittals be effective only upon or after their date of issuance and not be retroactively enforced; and (3) PROs, as well as the SuperPROs, more actively solicit input from organized medicine regarding the development of criteria sets and generic screens which are used in the PRO review process.

Resolution 41 called upon the AMA to meet with Health Care Financing Administration (HCFA) officials to convince them that notification to Medicare beneficiaries of the reasons for denial for quality issues will have a detrimental effect on physician/patient relationships, increase litigation and medical liability insurance premiums.

Resolution 76 asked that the AMA take all available steps within its means to assure that the PRO program is adequately funded for its mission and that HCFA carries out the original intent of the law, including the need to assure physicians' due process and proper use of regional and community medical standards in the implementation of the law by contracted PROs.

Resolutions 137 and 140 asked that the AMA seek modification to the "Content of the Notice" found in the Medicare PRO Manual to ensure that all appeal mechanisms are exhausted prior to the beneficiary being sent a denial letter, and that the language in the denial letter does not jeopardize the patient/physician relationship.

14. Substitute Resolution #75 was approved as follows:

Resolved, That the American Medical Association study the impact of current peer review policies mandated by the federal government on graduate

medical education and on physicians who volunteer their time to train resident physicians.

15. Amended Resolution #72 was approved as follows:

Resolved, That the American Medical Association urge physicians to encourage and assist their patients who feel that they have been wrongfully denied payment for services deemed necessary by physicians to register their complaint directly with the White House by using the physician's office telephone and calling (202) 456-1414.

16. Amended Resolution #47 was approved as follows:

Resolved, That the American Medical Association strongly encourage all medical schools to adopt mechanisms of implementing a program for Hepatitis B vaccination for students prior to their clinical training.

17. Substitute Resolution #99 was approved:

Resolved, That the American Medical Association recommended that physicians be sure to include the use of tobacco products as a contributing factor on death certificates whenever warranted by their clinical judgment.

18. Your Delegate was elected to the Board of Directors of the Forum for Medical Affairs, the group responsible for presenting a program the day before the opening of the House of Delegates, which addresses items of socio-economic importance and facing physicians and included the appearance of the U.S. Attorney General Edwin Meese III at the Las Vegas Meeting.

Amended Resolution #25 regarding the Forum was approved as follows:

Resolved, That the House of Delegates of the American Medical Association affirm its wholehearted support of the Forum for Medical Affairs and urge that the various delegates within the House persuade their parent organizations to participate in the support of the Forum for Medical Affairs.

19. Appended to this report is a copy of the letter received from the U.S. Justice Department regarding physician's services on peer review committees and a memorandum developed by the AMA regarding Same.

Your Delegate served on Reference Committee F, the committee which reviews the AMA finances and related items. This appointment is a two session appointment and carries over to the Annual Session in June, 1987. I was impressed by the caliber and expertise of the persons employed by the AMA to carry out its fiduciary mission.

You should be aware by now that the AMA has purchased its own Mutual Fund (AMA Advisory - formerly PRO Services) which will assume increasing responsibility for the AMA's pension funds. The financial advisors who have so successfully guided the AMA's investment plans will continue to advise the AMA Advisors family of funds. AMA Advisors is a No Load family of funds, listed daily in the mutual funds section of the newspaper, which permits daily switching of funds if desired.

It is also worthy of note that the North Central Medical Conference, which includes the State and Specialty Delegates from Minnesota, Iowa, Wisconsin, North Dakota, South Dakota, and Nebraska, is developing into a most worthwhile forum for the exchange of views on items

under consideration and as a political association for the support of Conference Candidates. The North Central Medical Conference was invaluable in the election of Nebraska's Jerald Schenken to the Board of Trustees and will provide strong support for Jerry's reelection campaign in 1988.

Your AMA Delegates, Doctors Coe, Cornelius, and Gogela, and Alternates, Doctors Roffman, Walker, and Cherry, were proud to represent the NMA at the Las Vegas Meeting and solicit your questions and input regarding items of particular interest.

Respectfully submitted,
C. J. Cornelius, Jr., M.D.
Delegate

MEMORANDUM

December 7, 1986

TO: House of Delegates
FROM: Board of Trustees
SUBJECT: Antitrust Laws and Peer Review

The House of Delegates has directed the Board of Trustees to pursue appropriate avenues to improve the ability of physicians to conduct good faith peer review of quality of care. In response, the AMA has, among other activities, drafted and supported Federal legislation to immunize peer review, it has successfully intervened in court actions to protect state peer review immunity statutes as in **Patrick v. Burget**, and it has drafted model state legislation to enhance the protection for peer review.

In addition, the Washington office and the Office of the General Counsel initiated discussions with the Department of Justice some six months ago to attempt to obtain Justice Department endorsement of the peer review process. A chief obstacle to peer review is the fear of physicians, based on recent litigation, that even good faith peer review can expose physicians to anti-trust liability. The AMA does not believe that such peer review raises significant antitrust risks for physicians or that the fear of such liability should be a basis for physician reluctance to actively carry out the duty to engage in peer review.

The AMA is pleased to present the attached letter from the Acting Assistant Attorney General of the United States in which the Department of Justice states unequivocally that peer review activities based on quality of care are pro-competitive and in no way violate the antitrust laws. As the Department's letter states:

In closing, it bears repeating that the antitrust laws do not stand in the way of physicians' participation in hospital peer review conducted to identify and restrain incompetence in the provision of health care. To the contrary, because such peer review enhances both the quality and efficiency of the services delivered in our nation's hospitals to the benefits of consumers, it furthers the antitrust goal of fostering competition in the health care marketplace.

The AMA expresses its appreciation to Attorney General Edwin Meese III, and the Justice Department for their cooperation and hopes that the Department's letter will help to relieve the concerns of many physicians and thereby improve the effectiveness of the peer review process.

December 2, 1986

Kirk B. Johnson, Esq.
American Medical Association
535 North Dearborn Street
Chicago, Illinois 60610

Dear Mr. Johnson:

This letter responds to your letter of November 26, 1986, requesting that the Antitrust Division of the Department of Justice address a matter that is of considerable importance to the medical community. Your letter states that many physicians are concerned about whether members of the medical staff of a hospital may incur liability under the antitrust laws when they participate in the credentialing or "peer review" process at a hospital. You requested the Division address the question, "whether good faith peer review activities designed and reasonably conducted to prevent incompetent physicians from obtaining or maintaining staff privileges violate the antitrust laws."

It would be most unfortunate if physicians refrained from participating in hospital peer review activity because of an unwarranted fear that such participation was likely to pose serious concerns under the federal antitrust laws. Put simply, there is no reason to expect a clash between the antitrust laws and peer review conducted to eliminate incompetence in the delivery of health care services. Quite to the contrary, the greatest potential of peer review is its ability to foster the basic goals of the antitrust laws in the health care industry — the efficient delivery of quality services in a competitive marketplace.

There are fundamental reasons for the harmony between antitrust policy and legitimate peer review. Correctly interpreted, the antitrust laws reflect the fact that the protection of competition in a health care market does not dictate that a hospital accord privileges to every practitioner who desires to use its facilities — the antitrust laws protect competition, **not competitors**. A hospital, therefore, is justified in according privileges in a selective manner so as to maintain high standards of quality and efficiency in furtherance of its own business and competitive objectives. In addition, a hospital may legitimately decide to deny privileges to an incompetent practitioner, based on good faith peer review conducted by the medical staff. Although the denial of privileges might make it difficult or even impossible for the practitioner to engage in his profession, such a denial does not impair competition. Rather, because the denial will enhance the quality and efficiency of health care and thereby strengthen the hospital's competitive position, peer review serves the underlying goals of the antitrust laws.

The benefits of peer review in eliminating incompetence in the provision of health care are recognized not only in traditional antitrust analysis, but also in the recently enacted "Health Care Quality Improvement Act of 1986," which the President signed on November 14, 1986. That legislation immunizes health care entities and physicians from damage liability for participating or assisting in peer review determinations that deny or restrict a physician's hospital privileges and competency grounds, provided that such determinations are reached pursuant to fair procedures and meet other specified standards. In essence, the new law provides an antitrust immunity from damages for legitimate peer review that attempts in good faith to weed out incompetent physicians.

Compliance with the provisions of the Health Care Quality Improvement Act of 1986 should provide immunity from damages for a peer review determination denying or restricting the hospital privileges of an incompetent physician. Of course, even if a peer review determination does not qualify for such immunity, that does not necessarily mean that the peer review violates the antitrust laws. Indeed, only in the exceptional circumstance where the peer review process is not used to review individual competence but rather is a sham used to exclude a competent practitioner or group of practitioners from the market and thus to restrain competition, would an antitrust violation ever exist.

In closing, it bears repeating that the antitrust laws do not stand in the way of physicians' participation in hospital peer review conducted to identify and restrain incompetence in the provision of health care. To the contrary, because such peer review enhances both the quality and efficiency of the services delivered in our nation's hospitals to the benefit of consumers, it furthers the antitrust goal of fostering competition in the health care marketplace.

Sincerely,
Charles F. Rule
Acting Assistant Attorney General

REPORT OF CREIGHTON UNIVERSITY SCHOOL OF MEDICINE

During the past one to two years, we have continued our efforts to enhance the educational opportunities for our students and residents by developing new programs and recruiting new faculty members in specialty areas.

One of the most exciting developments of the recent past is the approval by the U.S. Food and Drug Administration of our Medical Center as a test site for a left-ventricular-assist device. We have developed the needed laboratory, and an interdisciplinary team is currently training in the use of this device. We expect that it may come into clinical use within the year.

We also have developed a diabetes research and clinical referral center under the direction of Dr. Marc Rendell. In addition to conducting clinical and laboratory research, the center is intended to be a resource for referring physicians and patients with difficult-to-control diabetes.

We also have established a perinatology center under the direction of Dr. Washington Hill, who came to us from the University of California-Davis. Dr. Hill already has proved his worth to local citizens and practitioners by the provision of education programs and support services for high-risk pregnancies.

Extramural support of our research activities also has continued to expand. At the present time, the School of Medicine faculty has extramural grant support of \$9,351,210. This is a significant increase over several years ago and is the result of a steadily accelerating effort by our faculty members to increase their research productivity and to attain extramural grant support for it.

We also continue to work closely with the University of Nebraska College of Medicine in an effort to better serve the citizens of the region and the state. We currently have combined residencies in orthopedics and neurology. We recently have established a combined Fellowship program for child and adolescent psychiatry. We intend to develop a combined residency program in pediatrics. We have begun discussions on possible collaborative programs in

psychiatry as well as obstetrics and gynecology. The administrations at Creighton and the University of Nebraska strongly believe that combinations of resources will result in stronger and better educational programs for our residents and our students. In many instances it also will achieve cost savings for the citizens of Nebraska.

The National Matching Program was completed in March. A very high percentage of our students have been placed in prestigious university programs in various parts of the country. Twenty-nine will be training in Omaha either in Creighton, University of Nebraska or combined programs. The remaining seventy-nine are dispersing to various parts of the country, generally close to where they call home.

Thank you for the opportunity to present this brief semi-annual report to the Nebraska Medical Association from our School of Medicine.

Respectfully submitted,
Richard L. O'Brien, M.D.
Dean

REPORT OF THE UNIVERSITY OF NEBRASKA COLLEGE OF MEDICINE

This has been an exciting and busy six months at the University of Nebraska College of Medicine, mainly due to budget problems, which unfortunately means that a lot of the business and excitement has not been very productive towards accomplishing our missions of education, research and service. However, there have been some positive accomplishments.

One of these very positive accomplishments has been the arrival of Dr. Jaime Frias as the new Chairman of the Department of Pediatrics. Dr. Frias is a geneticist who was the Chief of that division at the University of Florida College of Medicine in Gainesville. He is an accomplished investigator, clinician, teacher and administrator, and has already had a very positive impact on the department, as well as the pediatric community in the state. He is actively recruiting in several areas to strengthen the Department of Pediatrics, including hematology/oncology, pulmonary diseases and endocrinology.

We have all been saddened by the decision of Joe Scott to resign as Chairman of the Department of Obstetrics and Gynecology after 13 years of service to the state in that capacity. Fortunately, Dr. Scott has agreed to stay on as a Professor in the department, which will enable him to devote more of his time to teaching and patient care, areas in which he has much to offer. The search committee has already been very active, under the chairmanship of Dr. James Armitage. By the time of the Annual Session, we may already have identified the new chairman.

We have also undertaken some reorganization of department structures in the College. This reorganization has been carried out for administrative efficiency and economy. As a result of the retirement of Dr. Miles Skultety as Chairman of the Department of Neurosurgery, after 12 years of service in that position, as well as in numerous other important positions in the College of Medicine including Associate Dean for Clinical Affairs for eight years and Interim Dean of the College (7/78 - 2/79), and the resignation of Dr. Donald Bennett as Chairman of Neurology, Neurosurgery will become a section of the Department of Surgery and Neurology will become sections in the Departments of Internal Medicine and Pediatrics. Dr. Lyal Leibrock has been appointed as Section Chief of Neurosurgery, Dr. Ronald Pfeiffer as Section Chief of Adult Neurology, and Dr. Richard Torkelson as Section Chief of Pediatric Neurology.

Although not a part of the College of Medicine, another very important position to the College is the Director of University Hospital. Since Mr. Robert Baker resigned that position last October, Mr. Brent Stevenson has ably performed as Interim Director. A search committee is, as of this writing, finishing its task, and by the time of the Annual Session a new Hospital Director will probably have been named.

As alluded to above, the budget cut debate has consumed a lot of time and energy for me, other administrators at UNMC, and various members of the faculty. This process has a very serious impact on morale, and certainly diverts us from our primary functions. If there are cuts, whether they be in the College of Medicine or in our other health care professions, they can only have a diliterious effect on us all. A university is not made up of independent programs, which have no impact on each other, but is like a symphony orchestra. The whole far exceeds the sum of the parts, and when one instrument in the orchestra is removed or becomes poor in quality, the result is clearly inferior. Of particular note is the potential for cutting some of our residencies, which would have a very negative impact on the quality of health care for the people of Nebraska in many ways, including the availability of training for our students, a diminution in qualified practitioners, and the probability of loss of very good faculty. Another potentially serious area of budget cuts is in Continuing Medical Education. There could be no worse time for reduction in CME, since the move towards mandatory recertification is gaining strength throughout the country. Another serious result of budget cuts will be a diminution in support for biomedical research.

One other area about which I should like to comment is what I believe is a misperception regarding changes which have occurred over the last two years at the Nebraska Psychiatric Institute and the Department of Psychiatry. When there is a change in chairmanship of a department, there are frequently changes in philosophy and personnel. This is particularly true in an area which is so rapidly changing with respect to its scientific base and philosophy as is psychiatry. While we have lost several members of our faculty, and this is almost never a beneficial thing to have happen, we have also recruited several fine additions to the faculty. I firmly believe that there has been no adverse effect on medical student or resident education, or on patient care.

Respectfully submitted,
Robert H. Waldman, M.D.
Dean

REPORT OF THE STATE DEPARTMENT OF HEALTH

As a result of legislative action at both the federal and state levels, changes in our health programs have been or will be effected.

One of the most recent changes has occurred as a result of the repeal of health planning legislation through congressional action last fall. As of the first of 1987 we have ceased this activity and effected a reduction in staff accordingly. Now we are faced with the problem of maintaining the Certificate of Need program without benefit of Federal support. We are seeking, however, to maintain some level of planning to assure the continuation of this service.

Last year too, the credentialing program (LB 407) operated differently from the previous year with the

Board of Health taking an active role in the program. Four applications were reviewed and reports were submitted to the Legislature recently for their review and action. An application for licensure at two levels of radiologic technology was recommended by the technical committee. However, the Board of Health and the Director of Health both recommended that no credentialing was needed and that we need to strengthen enforcement of current regulations on x-ray machines. An application of licensure of three levels of medical technology received mixed reviews. The technical committee recommended no credentialing, the Board of Health recommended licensure of lab personnel in unregulated facilities, while my recommendation was for no credentialing but create a laboratory system for quality control and proficiency standards. A review of an application from the dietitians and nutritionists resulted in agreement by the technical committee, the Board of Health, and myself that no credentialing is needed. Similarly, an application from the naturopathic physicians produced recommendations that no credentialing is needed. Legislative bills affecting these four health occupations recently were heard by the Health and Human Services Committee.

Other changes can be expected as affecting the discipline of health professions. As you know, recent publicity focused on the low percentage, as compared to other states, of physicians disciplined in Nebraska. We are attempting to increase our staff efforts in this area and provide the leadership essential to investigate matters. Additional legal staff both in the department and the Attorney General's Office have been added. Also LB 691, the Chemically Impaired Professional Act, which at this time is still in committee, is an important component and I believe can be structured to complement the peer support process of the Medical Association.

Some changes will occur in the health manpower program of the department as a result of the recent passage of LB 485. The structure of the Rural Health Manpower Commission should become more representative of the rural areas. Also, the effectiveness of the physician referral service should be increased by the setting of fees for communities involved in physician recruitment activity.

Another significant change affecting physicians and hospitals results from the passage of LB 385. The metabolic screening of infants born in Nebraska will now include biotinidase along with PKU and hypothyroidism. In addition, we will be making improvements in the way data will be collected and compiled to assure that every child born in the state has been tested for metabolic disorders. This corrects a condition that existed which last year produced a degree of uncertainty for over 200 infants on which necessary information was not available and a risk existed that someone was missed.

Another change through LB 472 is expected to result in better health care for the children in the state. Day care facilities will now be required to report proof that children cared for are protected through immunization. This preventive measure (immunization) must be maintained as an effective means of protecting the children from diseases.

Through LB 383 we are continuing our efforts to assure that safe drinking water is available in Nebraska. We will focus on lead free water (type of plumbing) and continue to monitor water for chemicals, radiation, bacteria, and other contaminating materials.

In addition to legislative change, a program change is now taking place in the restructuring of the Emergency

Medical Services (EMS) program. Over the past years the six service areas in Nebraska were provided EMS management by regional EMS Councils supported by non-profit corporation staff. Because of reductions in funding through the block grant system and other problems associated with this type of structure, we found it necessary to discontinue funding support to these entities and seek other ways of managing the program. Now efforts are being made to staff the councils using state personnel located in Scottsbluff, North Platte, Kearney, and Lincoln. We feel that this change can be effected with an overall savings to the program while retaining the necessary management structure essential for coordinating the many and diverse EMS units in Nebraska.

I am looking forward to working with the Medical Association in making other changes found essential for accomplishing our mission in public health.

Respectfully submitted,
Gregg F. Wright, M.D.
Director

REPORT OF THE NEBRASKA MEDICAL FOUNDATION, INC.

The Nebraska Medical Foundation is pleased to report that physicians contributed \$10,695 to the program during the past year. In addition, \$1,760 was contributed by representative groups within the Nebraska Medical Association Auxiliary.

LOAN AND SCHOLARSHIP PROGRAMS: The Foundation continues to assist medical students by providing loans during their training. A student is permitted to borrow \$2,500 during each year of training as a medical student. During 1986, the Foundation approved loans totalling \$23,750 to medical students at Nebraska's two medical schools. The current balance of outstanding loans to medical students still in training is \$58,700. The balance of loans currently under repayment by individuals who have completed medical school training is \$272,643.-93.

The Foundation continues to make available financial support through its Student Research Scholarship Program. One student from each school is presented a \$1,000 scholarship check during the Annual Session. The second \$1,000 payment is provided to the student when the report of his/her research project is received.

TUMOR REGISTRY: Representatives of the State Department of Health, the Nebraska Medical Association/Nebraska Medical Foundation, and the Howard Hunt Tumor Registry/Methodist Hospital have been meeting to finalize the agreement under which the Nebraska Tumor Registry Program will function. It is anticipated that with completion of the proposed rule and regulation process, the finalization of contract wordage, and the agreement to cost factors, the registry will be implemented in a very short time. The Nebraska Medical Foundation has pledged \$20,000 toward the first year operation as a one-time contribution. This is a unique private/public relationship that will insure that the registry program in Nebraska will be standardized, utilizing as the basis of function, the program developed by the NMA Ad-Hoc Committee on Tumor Registry which was funded by the Foundation.

The Foundation Board of Directors greatly appreciates the contributions provided by members of the Association

and the funds generated through the efforts of the Auxiliary. Your continued support is requested and encouraged.

Respectfully submitted,
Howard A. Dinsdale, M.D.
President

REPORT OF THE COMMISSION ON ASSOCIATION AFFAIRS

Harry W. McFadden, M.D., Omaha - Chairman; R. A. Blatny, M.D., Fairbury; Stuart P. Embury, M.D., Holdrege; Joel T. Johnson, M.D., Kearney; Bernard L. Kratochvil, M.D., Omaha; Walter O'Donohue, MD., Omaha; Joseph E. Sticher, M.D., Lincoln; R. C. Weldon, M.D., Nebraska City; Marilyn Mellor, Omaha.

The Commission on Association Affairs met March 19, 1987.

Mrs. Desta Osborne of Lincoln, Nebraska reported for the Auxiliary of the Association. Her report was as follows:

The Auxiliary has accomplished most of our goals set for the year. We have visited all 12 organized auxiliaries and 3 member-at-large events. By the end of the year we will have 4 National Auxiliary officers visit the state and county meetings. Four county president-elects and several state officers from the auxiliary have attended the Leadership Conference in Chicago.

Thanks to the NMA office staff, our newsletter editor, health projects chairman and NMA Journal, our communication to our members has been more frequent and full of information for everyone.

We have started a Key Contact Program for the State Senators and these same people will be used for the NMA Auxiliary phone bank for national issues. We had a very successful legislative day and enjoyed having some of the physicians attend.

The county auxiliaries continue to work and support community health projects.

Ardis Grace continues her work with Lion's Clubs on her colorectal screening program.

Membership is about status quo with all but two members unified. We will be receiving an award at the AMA Auxiliary Convention for our unified membership. We have about 775 members.

AMA-ERF and Nebraska Medical Foundation fund raisers have been held in most of the county auxiliaries.

PAC membership have been solicited and some response has been realized. We hope to improve on this next year.

The next report was from the University of Nebraska Student Chapter. This report was presented by Ms. Marilyn Mellor who indicated that the student chapter has been active and has held a highly successful resident symposium. She noted that the Chapter will hold a marathon run in April with proceeds of the run going to the American Cancer Society. She also noted that the University of Nebraska Chapter has aided the Creighton Chapter in getting started. A suggestion was made that a Creighton student should serve on this Commission and certainly the members of the Commission agree when the Student Chapter is organized.

The next item of discussion concerned the structure of the House of Delegates. This matter was referred to the Commission by the Board of Directors of the Association.

The Board has received complaints from members of the Nebraska Medical Association concerning some physicians holding more than one office in the Association, i.e., Delegate to the Nebraska Medical Association and Delegate to the American Medical Association. It was apparently believed by the complainants that a change in the structure of the House of Delegates might encourage young physicians to become more active in the Nebraska Medical Association. In conjunction with this specific issue the Board of Directors has also asked the Commission to consider a second matter which would possibly make members of the Board of Directors, Councilors, the AMA delegation, and the last five past presidents of the Association members of the House of Delegates with vote.

The foregoing matters were considered by the Commission. It was pointed out that in societies using the Sturgis Rules of Parliamentary Procedure, ex-officio members are normally voting members unless specifically excluded. Doctor McFadden pointed out that Delegates and Alternate Delegates to the American Medical Association should probably also be Delegates to the Nebraska Medical Association so that they may know the issues and concerns of the House and of the membership of the Association. During this discussion a suggestion was made to recommend an amendment to the bylaws which would automatically provide that AMA Delegates and Alternates would have a seat in the House of Delegates of the NMA with a voting right, thus freeing their component society to fill the open delegate position with another physician.

THE COMMISSION RECOMMENDS TO THE HOUSE OF DELEGATES AN AMENDMENT TO THE BYLAWS WHICH WOULD PROVIDE THAT AMA DELEGATES AND ALTERNATES, ONCE DULY ELECTED, WOULD AUTOMATICALLY HOLD A SEAT IN THE HOUSE OF DELEGATES OF THE NMA WITH VOTING PRIVILEGES.

The Commission discussed the possibility of making members of the Board of Councilors automatic members of the House of Delegates with vote. In this area it was pointed out that the Councilors are elected from geographical districts of the state and that their official function is a judicial one. Some thought that there might be some conflict of interest having such members (councilors) be automatic members of the House of Delegates with vote. It was noted that many Councilors are also elected Delegates from their component society. The Commission felt no need to make changes in the bylaws concerning the councilors at this time. Similarly, there was discussion of the officers of the Association and of the elected members of the Board of Directors; again, the members of the Commission saw no need to make changes in the bylaws concerning these groups.

The commission discussed the possibility of having past presidents seated as Delegates in the House with vote. The bylaws currently state that all past presidents living in the state are automatically ex-officio members of the House of Delegates without vote. After considerable discussion of this area suggestion was made to recommend that the immediate past president of the Nebraska Medical Association be a member of the House of Delegates with a voting privilege. The Commission unanimously concurred with this suggestion and hereby offers this proposal as a suggested amendment to the bylaws for action by the House of Delegates. **THIS RECOMMENDATION, IN EFFECT, STATES THAT THE BYLAWS OF THE ASSOCIATION SHOULD BE ALTERED TO ALLOW THE IMMEDIATE PAST PRESIDENT TO BE A MEMBER OF THE HOUSE OF**

DELEGATES WITH A VOTE. The other past presidents living in the state would continue as ex-officio members of the House of Delegates without vote.

The next item relates to local (NMA and component society) programs regarding Medicare. The Commission on Association Affairs had received from the President and the Board of Directors as a memorandum from the AMA Board of Trustees which is asking physicians to continue to accept assignment for Medicare beneficiaries whose economic situations dictate the need for this type of assistance. In addition, the AMA is asking that Medical Associations take the lead in considering and developing formal programs at the state and local level to help provide assignment for all low income beneficiaries.

The Commission reviewed the materials received from the American Medical Association and also reviewed information received from the Department of Social Services of the State of Nebraska regarding poverty in Nebraska.

It was pointed out that the American Academy of Ophthalmology has a program wherein its members are accepting assignment or seeing patients whose economic situations are such that they cannot afford care. This program is essentially based upon a means test and has apparently been working well for the ophthalmology group.

Several members noted their concerns about the development of these types of programs. These members of the Commission pointed out that most persons who need care are receiving it whether they can pay for it or not. It was pointed out that there is availability of medical care for most people who need it. There was some concern stated that when physicians accept patients for reduced fees or no fees and public notice is made of such, then in the future the government might possibly establish a mandate for such at a later time. The members of the Commission felt that frequently it is better to render care for those unable to pay without fanfare and without a public relations event.

The Commission discussed ways of getting the public educated to the fact that physicians are already seeing economically-inhibited persons and caring for them even though they cannot pay. There was some thought that no public education is needed as these persons who need the care are receiving it.

The Commission decided to report to the Board of Directors and to the House of Delegates that Nebraska physicians for the most part are accepting assignment on Medicare cases whose economic situations so dictate in a voluntary fashion, as well as providing affordable care to poverty-level and low-income persons. It was noted, however, that some hospitals will not accept patients who cannot provide assurance that their bill will be paid.

The next item of business was a review of materials used in solicitation of physician members to the Nebraska Medical Association. Staff reviewed with the Commission membership statistics and it was noted that in most all categories of membership, the NMA is about at an average position or level for this time of the year. Thus far in 1987, there are 58 new members and it was felt this shows that the NMA's membership recruitment efforts are effective.

The last item of business was a review by the Commission of NMA and AMA benefits offered to members of the respective societies.

It should be noted that there are two recommendations

for consideration and possible action by the House of Delegates found in the body of the report. These recommendations are placed in capital letters to make them stand out in the report.

The Commission wishes to express its appreciation to the NMA Auxiliary for its efforts.

REPORT OF THE COMMISSION ON MEDICAL EDUCATION

Frederick F. Paustian, M.D., Omaha - Chairman; Robert L. Bass, M.D., Elkhorn; Patrick E. Brookhouser, M.D., Omaha; Christopher P. Crotty, M.D., Omaha; Charles F. Damico, M.D., Hastings; Charles A. Dobry, M.D., Omaha; A. Dean Gilg, M.D., Lincoln; William E. Lundak, M.D., Lincoln; Richard L. O'Brien, M.D., Omaha; Dwaine J. Peetz, Jr., M.D., Omaha; Joseph C. Scott, M.D., Omaha; Robert H. Waldman, M.D., Omaha; Mary Kirker, Omaha.

The Commission on Medical Education has held three meetings since the fall meeting of the House of Delegates: October 2, 1986, November 13, 1986, and February 5, 1987.

Seven sponsors of continuing medical education programs submitted applications for accreditation, underwent site visits and had their statistical and narrative reports and site visit reports reviewed by the Commission. The following actions were taken by the Commission on Medical Education:

CME Sponsoring Institution — Archbishop Bergen Mercy Hospital, Omaha, Nebraska
Commission Action — Full accreditation, six years.

CME Sponsoring Institution — Great Plains Regional Medical Center (Initial application)
Commission Action — Provisional accreditation for two years with a progress report in one year.

CME Sponsoring Institution — Immanuel Medical Center, Omaha, Nebraska
Commission Action — Full accreditation for four years with a progress report in two years.

CME Sponsoring Institution — Lancaster County Medical Society/Lincoln Medical Foundation Medical Education Committee, Lincoln, NE
Commission Action — Full accreditation for four years with a progress report in two years.

CME Sponsoring Institution — Memorial Hospital of Dodge County, Fremont, Nebraska
Commission Action — Full accreditation for four years with a progress report in one year.

CME Sponsoring Institution — Nebraska Methodist Hospital, Omaha, Nebraska
Commission Action — Full accreditation for six years.

CME Sponsoring Institution — West Nebraska General Hospital, Scottsbluff, Nebraska
Commission Action — Full accreditation for four years.

The Commission has now completed its accreditation action on all pending applications from sponsoring institutions of continuing medical education programs.

The Policy and Procedure Manual for Accreditation of Sponsors of Continuing Medical Education underwent minor modifications so as to be in conformity with the Accreditation Council of Continuing Medical Education Requirements and Guidelines. In view of the completion

of action on the backlog of applications for sponsor accreditation, the new Policy and Procedure Manual for Accreditation has been formally activated. A copy of the manual has been distributed to all accredited sponsors of continuing medical education within the State of Nebraska and to each specialist site visitor for the Commission.

On November 13, 1986, the Accreditation Council for Continuing Medical Education sent two members of their Review and Recognition Committee, Dorothy Welby, Chairman, and William M. Goodall, M.D., to visit with the Nebraska Medical Association Commission on Medical Education and undertake a site visit of the Commission's accreditation process of sponsors of continuing medical education programs. Action by the ACCME on the NMA-CME accreditation process application is expected in April or May, 1987.

The NMA-CME undertook a review of the NMA By-Laws as regards the Commission's charge. All members of the Commission are now fully apprised of their responsibility to the Nebraska Medical Association.

REPORT OF THE COMMISSION ON PUBLIC AFFAIRS

Rodney S. W. Basler, M.D., Lincoln - Chairman; H. Jeoffrey Deeths, M.D., Omaha; Herbert D. Feidler, M.D., Norfolk; Edward E. Gatz, M.D., Omaha; Donald T. Glow, M.D., Omaha; John J. Hoising, M.D., Omaha; Roger P. Massie, M.D., Plainview; Donald E. Mathews, M.D., Lincoln; Harlan C. Schriner, M.D., Lincoln; F. Thomas Waring, M.D., Fremont; Beth Kolars-Bruening, Omaha.

The Commission is evaluating the positive attributes of the medical profession which we especially wish to present to the public. Current activities of the Commission aimed at improving public relations through gratuitous public service include the preparation and distribution on a regular monthly basis of "Health Tips" and other news releases which describe new medical findings in terms easily understood by laymen. These short subjects are released to local newspapers and radio stations across the state.

We are again considering the production of the NMA President's annual "State of the Health" report which is produced for media representatives. Radio stations received fifteen 30-second recorded "spots" on health items by NMA President Doctor Walker which they often use. In addition, the Commission helped coordinate member participation in the televised "Health Line" series, and secure appropriate spokespersons for conferences and media interviews.

A number of new projects have been initiated which are intended to advance the concept of the physician as patient advocate among the general public. Included in these is the promotion of fitness, good health habits, and the attitude of wellness through press releases. Presently, we are working closely with Governor Orr's staff in establishing positions on health-oriented issues.

Better exposure to the press of selected Nebraska Medical Journal articles, including interviews with the authors, is expected to both increase lay interest and awareness and stimulate more state physicians to become contributors. A brochure explaining the various forms of health insurance and distribution systems was made available to NMA members for patient distribution.

REPORT OF THE COMMITTEE ON HEALTH PLANNING

C. J. Cornelius, Jr., M.D., Sidney - Chairman; Gordon D. Adams, M.D., Norfolk; Lewiston W. Birkmann, M.D., Lincoln; James S. Carson, M.D.,

McCook, Chris C. Caudill, M.D., Lincoln; Allen D. Dvorak, M.D., Omaha; Dale W. Ebers, M.D., Lincoln; Louis J. Gogela, Jr., M.D., Beatrice; Roger D. Mason, M.D., Omaha; Donald F. Prince, M.D., Minden; C. Lee Retelsdorf, M.D., Omaha; Thomas H. Wallace, M.D., Gordon; Mr. George Zieg, Omaha.

No meeting of the Committee on Health Planning has been held since the Fall Session but several items of interest regarding health planning have occurred.

1. The Congress did not appropriate funds to continue health planning so the State Health Department is closing out its health planning functions with carryover funds only. The division of health planning will continue but with a very reduced staff. There were enough funds to complete the planning cycle and the issuance of the 4th Edition of the State Health Plan. The CON law remains in effect and the statistical analysis section of the State Health Department will continue.

The grass roots input into the planning process provided by the Area Health Advisory Councils will continue in some areas of the state as an unfunded activity with some staff support from the State Health Department.

2. Health Planning will not cease to exist just because the federal health planning expenditures ceased. However, the burden for health planning has once again been shifted to the state level and will be carried out in much the same fashion as it was before the federal excursion into this area. One fundamental difference exists: that is that the Federal Government will attempt to control capital expenditures via the reimbursement mechanism and it will require very accurate forecasting on the part of hospitals and providers in order to continue to improve health care services and facilities and remain financially viable. It's easy for me to say!

3. The Committee on Health Planning recently agreed to provide a Physician Advisory Panel for the State Health Department for a Cancer Program if the state is successful in its bid for a federal grant to pursue this program. This program will utilize the information compiled by the Tumor Registry as a basis for its direction.

4. Your Chairman presided over a Task Force studying the impact of regulation of health care facilities which concluded its work in late October of 1986 and transmitted its report to Dr. Wright, the Director of Health. It was the consensus that a better understanding of the regulatory process and improved communication between the Health Department and the provider institutions is both desirable and necessary. This Task Force plans to review progress made on the recommendations after six months and reconvene in one year to assess the positive results of our deliberations. The Hospital Association will be meeting with the regulatory division of the Health Department on a periodic basis in the interim to see if it is possible to move toward a single set of standards for hospitals (as much as possible) using the new federal requirements for participating in Medicare as the basis for these discussions.

5. The Health Policy Agenda for the American People was released by the AMA on 2/23/87 in Washington, D.C. This document is designed to form the basis for the rational development of health policy for the next 10-20 years and copies of the document have been distributed to the members of both houses of Congress and to many other interested groups and organizations. The recommendations will be considered by the AMA House of Delegates at the 1987 Annual Session and most of these will be approved. There are a number of recommendations which call for increased government funding for

research and some other programs, which may generate some discussion. On the whole, there are very few surprises in the recommendations. The process of arriving at a consensus document with the diverse groups represented, ranging from organized labor to the AARP, has to have been a mutual learning experience for those participating and it is hoped that this process will be most helpful in ensuring a more united effort in influencing health policy decisions in the future.

Your Committee on Health Planning will continue to monitor the activities of the State Health Department as it continues to attempt to meet its responsibilities with fewer federal dollars.

REPORT OF AD-HOC COMMITTEE ON ALTERNATE HEALTH PLANS II

Dale E. Michels, M.D., Lincoln - Chairman; Lonnie S. Albers, M.D., Lincoln; Audrey A. Paulman, M.D., Omaha; Dwaine J. Peetz, Jr., M.D., Omaha; Harlan C. Shriner, M.D., Lincoln; Sebastian J. Troia, M.D., Omaha.

The Ad-Hoc Committee on Alternate Health Plans II has not met during the 1986-87 year. Because of the excellent assistance that we have received from Ms. Pamela Hastings Carrier in contract analysis and the support materials provided by the American Medical Association, the Committee has not felt the need to hold a meeting or take any specific actions. We anticipate a continuation of the committee at the discretion of the Board of Directors and stand ready to act should there be any specific concerns which would require committee action. Our contract analysis service through the legal firm of Cline, Williams, Wright, Johnson and Oldfather has provided a review of four contracts since the 1986 Fall Session and the Association office has sent out several copies to individual physicians and county medical societies who have requested this information. We feel that this is the most appropriate posture for the Association to take and anticipate a continuation of this service to our members.

REPORT OF THE AD-HOC COMMITTEE ON MATERNAL & CHILD HEALTH

Kenton L. Shaffer, M.D., Kearney - Chairman
Section on Maternal Mortality Review

George M. Adam, M.D., Hastings; James G. Cummins, M.D., Omaha; L. Palmer Johnson, M.D., Lincoln; William Rayburn, M.D., Omaha; William L. Rumbolz, M.D., Omaha; Larry Wilson, M.D., Gothenburg.

Section on Perinatal Mortality Review

Lawrence C. Bausch, M.D., Lincoln; Stacie R. Bleicher, M.D., Lincoln; Robert S. Grant, M.D., Lincoln; Robert M. Nelson, M.D., Omaha.

The Ad-Hoc Committee on Maternal and Child Health dealt with several issues in 1986-1987.

The committee continues with the Maternal Mortality Report. There were four deaths of mothers who were pregnant in 1986. Two of these deaths were non-obstetrical. It was felt that one of the deaths definitely was an indirect obstetrical death, since the other underlying problem was from pulmonary disease and a drug abuser. The second death probably wasn't obstetrical in nature, but again, had some questionable circumstances regarding it. The committee wishes to thank Dr. Rumbolz for his continued input to our review.

The committee would like to continue to review perinatal death in the state. This has not been accomplished this last year, and the committee discussed this situation with the Maternal and Child Division of the State Health Department. Without their assistance in collecting the death information and abstracting the

charts for us, we will not be able to carry on this study. The Maternal and Child Health Division stated that they were still interested in this project, and are currently working on the 1985 perinatal deaths. As soon as these are all abstracted, committee members will begin to review these.

The committee also discussed current problems regarding the DPT vaccine. The committee realizes that the cost of the vaccine has skyrocketed in the last several years. This is in direct response to litigation against the companies. The companies have been unable to obtain insurance, and subsequently have started to self-insure themselves by arbitrarily placing an additional price on the vaccine to private practitioners. The current federal contact price where the Nebraska Department of Health receives their vaccine is not paying this add-on expense. Currently, there is no shortage of supply of vaccine within the state. There has been federal legislation introduced (S 1744, PL 99-660). This was the last bill passed by Congress in 1986. The President did sign this, but under duress. This bill sets up a program where a surcharge will be placed on vaccine after it is produced by industry. This surcharge will then set up a fund for infants who are damaged from the DPT vaccine. This fund would be administered through the U.S. District Court for compensation. The bill plans to cap pain, suffering and death at \$250,000, and will allow no punitive damages. Dissatisfied claimants will be able to appeal their verdicts in civil court, but must demonstrate manufactured negligence or wrongful conduct to collect damages. In doing so, however, they lose their recourse to the compensation system. In mid March of 1987, the House Ways & Means Committee held initial hearings on funding of this bill, and the Senate Finance Committee is scheduled to hold hearings within the next several months. It appears that this bill will be funded through separate legislation through a start-up fund from the insurance industry, and no government funds being used. It is expected that this process will be completed during the 1987 congressional session. The committee also reviewed a bill that passed by the General Assembly in the State of North Carolina. It was not felt by the committee by this time, that any further legislation should be introduced in Nebraska.

The committee also received a report from the new director of the Maternal and Child Health Division of the State Health Department, Georgia Bihr, and her administrative director, J. Douglas Campbell. They discussed the current organization of this MCH/Nutrition Division of the State Health Department. Since that meeting, the committee chairman has received several concerns regarding the Maternal and Child/Nutrition Division of the State Health Department, as well as for the Department of Social Services - Service for Crippled Children's Program. It is hoped that the Medical Association, in conjunction with other concerned organizations can work with the Nebraska Department of Health and the Nebraska Department of Social Services on these programs.

REPORT OF THE SCIENTIFIC SESSIONS COMMITTEE

Sushil S. Lacy, M.D., Lincoln - Chairman; Donald E. Waltemath, M.D., Lincoln; David L. Bacon, M.D., Kearney; Paul J. Bender, Jr., M.D., Omaha; Michael A. Breiner, M.D., Lincoln; Mark A. Christensen, M.D., Omaha; Richard A. Hranac, M.D., Kearney; Donald J. Larson, M.D., Lincoln; Donna K. Nelson, M.D., Omaha; Richard M. Tempero, M.D., Omaha; Mr. Andrew Blankenau, Omaha.

The format of the Annual Session has been changed to conform with the recommendations supplied to the Scientific Sessions Committee. The scientific programming will be presented primarily on Friday and Saturday,

and NMA sponsored business and socio-economic functions have been scheduled on Sunday through Tuesday. The Sportsman's Day banquet and Fun Night have been combined on Monday evening and this is the function at which Kenneth E. Neff will be honored for his many years of service to the Association as Executive Director.

Several new groups will join as participants in the 1987 Annual Session including both medical specialty organizations and organizations which will participate in the Monday through Tuesday programming. The Scientific Sessions Committee feels that an outstanding program has been developed with participation by both local and nationally-recognized presentors. We are optimistic about the success of the 1987 Annual Session.

Soon after the 1987 Session, the Committee will begin formulating plans for 1988. We welcome input from the House of Delegates in addition to that which will be solicited through the evaluation mechanism we will utilize during the current session.

REPORT OF THE AD-HOC COMMITTEE ON HEALTH POLICY STATEMENTS

C. Lee Retelsdorf, M.D., Omaha - Chairman; Daniel S. Durrie, M.D., Omaha; Darroll J. Loschen, M.D., York; Dale E. Michels, M.D., Lincoln; Charles S. Wilson, M.D., Lincoln.

The Ad-Hoc Committee on Health Policy Statements has responsibility for developing position papers for consideration by the House of Delegates.

The Committee presents the following statements to the House for its consideration.

NEBRASKA MEDICAL ASSOCIATION HEALTH POLICY STATEMENTS

Other Health Care Practitioners

The NMA believes that one of the changes taking place in health care at the current time is the explosion of the number of individuals who have something they feel will benefit the patient or themselves. Many of these individuals would like to be thought of as members of the health care team. However, in most cases, the scientific background and training is either lacking or leaves much to be desired. The Nebraska Medical Association believes that patients should seek the advice of a Doctor of Medicine or Osteopathy in deciding the most appropriate approach to specific medical problems, within the context of accepted standards and methods of care.

Smoking

The Nebraska Medical Association (NMA) recognizes that scientific evidence has irrefutably linked smoking with an increased incidence of cancer of the lung, lip, larynx, mouth, and urinary bladder. Smoking has also been clearly linked with an increased incidence of innumerable other health-related disorders, including gastrointestinal diseases (e.g., peptic ulcer), cardiovascular disorders (e.g., coronary and generalized atherosclerosis, hypertension, and cerebrovascular accidents), pulmonary diseases (e.g., asthma, and chronic bronchitis), and with multiple perinatal disorders (e.g., low birth-weight babies, peri-natal death, and increased incidence of spontaneous abortion).

The NMA also recognizes that smoking has been found to be more addictive than alcohol or heroin, and kills more Americans than any other personal health habit or any

other environmental hazard. According to some experts, smoking may be directly responsible for up to 450,000 deaths in America annually.

The NMA further recognizes, whereas cigarette smoking has been found to be the greatest hazard to health, that cigar and pipe smoking poses similar health hazards, particularly to those whose "air space" is violated by users of pipes and cigars. The NMA also recognizes that the health hazards of the so-called "smokeless tobacco" have only recently been more fully realized, and use of such "smokeless" tobacco as an alternative to other forms of tobacco use should be emphatically discouraged. To this end, the NMA will support all efforts to label "smokeless" tobacco as a health hazard, to prohibit its sales to minors, and to ban all advertising of it.

In addition to these health hazards, the NMA recognizes that smoking is directly related to fires causing extensive property damage, injuries, and loss of life. The economic loss caused by smoking in lost wages, decreased productivity, and damage to property is nearly incalculable.

In light of this evidence, the NMA is opposed to smoking and encourages all physicians to advise their patients, particularly teenagers and expectant mothers, of the hazards of smoking.

The NMA further believes that physicians should be proactive in the development of a smoke-free society, by such steps as elimination from their reception room all smoking paraphernalia, as well as all publications which carry tobacco advertising. The NMA believes that physicians should support this non-smoking concept by refraining from smoking themselves and insisting upon the same behavior by their staffs. Physicians should have available for their patients educational material on the dangers of smoking, as well as information on programs to encourage and aid their patients in their efforts to give up the smoking habit.

Recognizing its role in the promotion of good health to the population of the state, the NMA will serve as a reference point of information for its members for the dissemination of anti-smoking literature directed both at the profession itself, as well as to the patient population served by the NMA membership. The NMA will continue to endorse strong educational efforts, from kindergarten through the 12th grade, to help pre-teens, adolescents, and young adults avoid the use of tobacco products, including "smokeless" tobacco.

In support of the above-mentioned attitude, the NMA will prohibit smoking at any and all NMA functions. It will prohibit smoking by NMA officers and personnel, while acting officially in behalf of the NMA. The NMA will work to support the concept of a smoke-free environment in all health-care institutions, including hospitals. The NMA will support all efforts to remove smoking paraphernalia and tobacco sales from hospitals and clinics. The NMA will further endorse the passage of laws, ordinances, and regulations that would prohibit smoking in public buildings and facilities, prohibit vending machine sales of cigarettes and other tobacco products, and set the minimum age for purchase of tobacco products at 21.

Recognizing that smoking endangers all patrons of public transportation, the NMA supports a total ban on smoking on all public transportation, including airline flights.

The NMA supports a moratorium on any and all government subsidies to the tobacco industry, and further supports efforts at retraining and restructuring the

economies of those individuals and areas which have been heretofore dependent upon tobacco production and its government subsidy.

In recognition of the fact that tobacco companies in 1985 spent nearly two billion dollars to advertise cigarettes, the NMA supports a national ban on cigarette advertising (including promotional distribution of free cigarettes) and legislative action to effect such a ban, in concert with other organizations. The NMA encourages the development of state-wide non-smoking advertising campaigns directed particularly at youth and expectant mothers.

Since smoking has clearly been shown to decrease longevity and to increase morbidity in the population generally, the NMA supports legislative efforts to require insurance companies to issue policies at increased premiums to those who choose to jeopardize their health by the use of tobacco.

The Committee recommends the above statements be adopted by the House of Delegates.

The Committee received a resolution, adopted at the 1986 Fall Session, which directed that the NMA study the policies and practices of third-party carriers and that a policy statement be developed. We are working on this statement and anticipate submitting it to the House at the 1987 Fall Session.

REPORT OF THE NEBRASKA FOUNDATION FOR MEDICAL CARE

Movement into the second two-year contract for PRO in Nebraska has resulted in an expansion of many procedural activities.

HCFA emphasis on quality issues in this contract period has intensified contact with both the physician and hospitals.

The program concentration on "generic screens" has resulted in the receipt of many contacts from physicians. The concerns expressed in these contacts attest to the impact this portion of the program has produced.

Finally, through the efforts of many individuals and organizations, including ours, HCFA has agreed to modifications in the "generic screen" criteria that should result in a considerable reduction in the number of letters we are required to mail to physicians on quality matters. Changes will be as follows:

In regard to abnormal laboratory results, the review coordinators will not be required to refer (Item 2D) to a physician reviewer if the result is plus or minus 10% of the normal.

In regard to nosocomial infection (4 A & B), this is no longer considered a generic screen failure and does not require referral to a physician reviewer.

Also the program will be changed concerning physicians being placed on pre-admission approval if they have 2.5% of their admissions denied. HCFA as a result of many contacts has requested a change. At the time of this report, it appears that the number of admission denials will be increased to at least two before a physician would be placed on pre-review status. We also understand that the date for implementing this would be on cases dated on or after January 1, 1987, **not** November 1, 1986, currently stated in the plan. Because of the many changes necessitated by the new contract, it is vitally important that physicians be aware of and understand the program

and our responsibility. Therefore, we are renewing our commitment to improved communication with the physicians. Too often, physicians are not aware of or do not agree with federal laws and regulations that we must follow during our review. We will in the future make every effort to work more closely with physicians and hospital groups to explain federal regulations, while at the same time working in HCFA negotiations to try and simplify procedural and documentation requirements.

We are looking toward the establishment of a provider advisory committee that would meet on a regular basis to discuss issues and concerns brought to its attention by health care providers. Membership would include the Nebraska Medical Association. We feel this can be a very positive step in communicating our activity.

The changes that are mandated by this program are evident and the possibility of on going change via revisions and regulations will not cease. We do not feel this should automatically lead to physician confusion. With renewed commitment to a well-planned two-way communication effort, we are confident we can bridge our mutual responsibility in a productive and professional manner.

I would like to express appreciation to the Iowa Foundation for Medical Care, the contractor for Nebraska, for their support and willingness to assign the day to day responsibility for operation of the program to the staff in Nebraska. Within the context of the contract, the Nebraska staff is carrying out these responsibilities.

As well, Nebraska physicians are doing the day to day review. The quality assessment and comprehensive review committees are handling their responsibilities accordingly. Modifications in the program so far have been made in concert with the above committees recommendations and we are confident that any future revisions will likewise have such input.

Before closing, I would again emphasize the importance of being a physician reviewer. There is no better way to understand the processes of this program. We can use physicians from all parts of the state. Give the Lincoln office a call (402) 474-7471 and they will be happy to provide you with an information kit. Your participation would be sincerely appreciated.

We appreciate the opportunity to provide the House of Delegates with this progress report.

Respectfully submitted,
Herbert Reese, M.D.
President

REPORT OF THE AD-HOC COMMITTEE ON HEALTH EDUCATION

Warren G. Bosley, M.D., Grand Island - Chairman; Stephen J. Lanspa, M.D., Omaha; Paul H. Phillips, M.D., Scottsbluff; Eileen C. Vautravers, M.D., Lincoln; Wesley G. Wilhelm, M.D., Omaha; Gregg F. Wright, M.D., Lincoln; Janet Paisley, Omaha.

The Committee submits the following report to the House of Delegates.

The Committee has met on two occasions since the last report to the House, each time meeting with representatives from the State Department of Education, the State Department of Social Services, the Nebraska Education Association and the Nebraska Association of School Boards. A representative from the Nebraska Medical Auxiliary was also present.

The primary subject of discussion at these meetings has been the matter of teenage and adolescent pregnancy in Nebraska and ways in which the Association might assume leadership in organizing approaches to solutions to this problem in our society. The Committee was told about a Governor's Task Force on Health Promotion, with a subcommittee of this Task Force concerned also with the matter of teenage and adolescent pregnancy. The Committee was informed that this Task Force is arranging a symposium to be conducted in September of this year, bringing together individuals, department heads, and organizations to deal with these problems in Nebraska. Apparently there are no plans to continue discussion on a community level following this conference. The NMA will be represented by a member of this Committee.

The representative from the Nebraska School Board Association stated that she believes there is a need for leadership in organizing community approaches and also for some statement of purpose to which efforts for solutions can relate. It appeared that the Nebraska Medical Association might be in a position to develop such a statement of purpose and direction.

Since there now appears to be more acceptance of the idea of dealing with teenage pregnancy in health education programs in communities, especially in schools, the Committee believes that plans for community conferences should be developed. It was suggested that the Committee should try to determine what educational programs presently exist in Nebraska schools. The representative from the State Department of Education will develop a questionnaire, to be used in gathering this information. The Nebraska Medical Auxiliary will be able to contact schools and complete this questionnaire, the results of which will then be compiled by the Department of Education in cooperation with the NMA Committee. Many schools in Nebraska have courses in family living, health education and growth and development, and the Committee believes that physicians in Nebraska should and can participate in these programs, in cooperation with the school systems and with the direction of professional teachers. Members of the Committee and the guests agree that physicians can play an important role in this area, speaking as authorities in medicine and on the issues of pregnancy and the need for proper care of the pregnant teenager. The Committee noted that the state health plan recently released by the State Health Coordinating Council includes a statement on the necessity for health education courses in Nebraska schools, together with comments about other aspects of teenage and adolescent pregnancy. The Committee supports this statement and believes that information available to teenagers should deal with health education in its broadest aspects, including instruction about growth and development, human sexuality, mature sexual behavior and other aspects of health growth and development.

The present law dealing with health education in Nebraska schools was reviewed, with the suggestion that the Committee might consider refinement of this law, possibly recommending amendments. The Committee believes that the law is satisfactory and that this is not an appropriate time to suggest additional legislation in this area.

The Committee recommends to the House of Delegates continuing deliberations and discussions in this area, attempting to develop a statement which the House might consider at its interim meeting, and urges that the NMA continue to take an active role in coordinating programs and efforts which can lead to healthier and more satisfactory lives for our young people.

REPORT OF THE AD-HOC COMMITTEE ON MEDICAID SERVICES

Craig Urbauer, M.D., Lincoln - Chairman; Judith Butler, M.D., Superior; Gary Conell, M.D., North Platte; Russell Gorthey, M.D., Lincoln; Paul Hoff, M.D., Seward; Ronald Klutman, M.D., Columbus; Richard Svehla, M.D., Omaha; M. Allen Tompkins, M.D., Grand Island.

As a result of concerns expressed by various NMA members relative to activities and reimbursement schedules for Medicaid recipients, contact was made with members of the staff of the Department of Social Services. An ad-hoc committee of NMA members was identified who provided input into subsequent discussions between the NMA and the Department. Several meetings were held between NMA members and staff and certain members of the Department. In particular, Doctor Chris Wright, Laura Rigg, R.N., Bob Seiffert and Gary Cheloha represented the Department and contributed to the deliberations.

Reimbursement continues to be a major problem. Current reimbursement formulas which have been established on a "usual and customary" basis are extremely complex and difficult for virtually all parties to understand. As a result, there is misinformation and confusion throughout the system. The Department is conducting a study on this aspect, and it's conceivable that they may turn to some form of straight-forward fee schedule which might be more equitable and more easily administered.

The Department was also interested in identifying certain physicians in Nebraska who might be available on a consultative basis to talk with the Departmental staff members if philosophic problems arose and they felt medical advice would be helpful. A list of Nebraska physicians has been identified and these individuals have agreed to act as resources to the Department under these circumstances.

Finally, it was felt appropriate that the Department have an opportunity to present their problems and ideas to the NMA membership, and in this regard, arrangements were made to have a presentation at the Annual Session.

It is anticipated that there will be a cordial, ongoing relationship between the NMA and the Department as these difficult problems continue to be worked out.

REPORT OF THE COMMISSION ON LEGISLATION & GOVERNMENTAL AFFAIRS

Craig L. Urbauer, M.D., Lincoln - Chairman; Ronald L. Klutman, M.D., Columbus - Co-Chairman; Dwaine J. Peetz, M.D., Neligh - Advisor; Judith A. Butler, M.D., Superior; James H. Dunlap, M.D., Norfolk; Dale Ebers, M.D., Lincoln; Charles Gregorius, M.D., Lincoln; Bruce W. Henricks, M.D., Fremont; Barbara M. Heywood, M.D., Papillion; John T. McGreer, III, M.D., Lincoln; Dennis G. O'Leary, M.D., Omaha; Robert G. Osborne, M.D., Lincoln; Richard A. Raymond, M.D., O'Neill; Herbert E. Reese, M.D., Lincoln; Blaine Y. Roffman, M.D., Omaha; Jerald R. Schenken, M.D., Omaha; Bruce D. Smith, M.D., Kearney; Todd S. Sorensen, M.D., Scottsbluff; Richard B. Svehla, M.D., Omaha; Mylan R. VanNewkirk, M.D., Scottsbluff; Timothy O. Wahl, M.D., Omaha; Jean Sahs, Omaha; Brenda Barth, Omaha.

The Commission on Legislation and Governmental Affairs has been active on a regular basis since the last meeting of the House of Delegates. The Legislature convened in January for a 90-day session, and a record number of bills were introduced in the early days of the session. Subsequently, 85 of these bills were identified as having relevance to medicine. As the session has developed, we have concentrated our attention on those few which seemed most likely to impact practice at this

time. Many of the bills were monitored, mainly to be able to assess their overall impact.

LB 116, relating to optometric drug use, received considerable attention. This was primarily a reiteration of LB 131 which had been passed in the last session and signed by the Governor. LB 116 presented some minor modifications to attempt to bring the provisions in line with some areas of constitutionality which had been raised by the Attorney General. There was considerable discussion about attempting to completely defeat the entire issue again, and there was some discussion about adding some amendments which would stipulate certain liability provisions. However, although contacts were made and our position was delivered to the Senators, this bill was considered by the Unicameral to only be the cleaning up of a bill that had already been passed and as such, passed through the process without much discussion. It was also felt that the liability provisions were appropriately addressed in current Nebraska statutes.

A large amount of time was devoted to the concept of licensing radiologic technologists. The radiologic technologists were very well organized, and several NMA members have spent considerable time and effort working this bill in the 407 process and in the Health and Human Services Committee. Ultimately, the concept of requiring licensure for radiologic technologists was put on hold, but a compromise was arrived at whereby those individuals who were taking a radiograph would be shown to possess some minimum competence. This minimum competency could be obtained in a short technical training program and be followed with a brief, practical examination. Review of these features suggested that they were reasonable and would not be difficult to comply with.

A similar problem was encountered with LB 760 which related to the mandatory licensure of medical technologists. The med techs wanted everyone who performed laboratory tests to be licensed and it was felt by the NMA that this was not desirable or possible. Again, considerable effort was put forth through the 407 process and in the Health and Human Services Committee. At the present time this bill is being held in committee and will likely not come to the floor in this session, but will be held for interim study between sessions. It was the position of the NMA that the fundamental point related to quality control and that quality control will need to be addressed by all practitioners. It is anticipated that there will be considerably more discussion on these points as time passes.

LB 187 was opposed by the NMA. This bill changed reimbursement on Workmen's Compensation cases from "usual and customary" to a fee schedule. It was felt by the Workman's Compensation Court that a fee schedule would be much more easily administered and the Legislature agreed with this, and the bill went through the Legislature quickly. There was considerable support and virtually any contrary considerations that were raised were brushed aside. The bill is currently on final reading and is likely to be passed and signed in the foreseeable future.

Bills which were supported included the organ retrieval proposal which establish protocol for approaching family members about obtaining suitable organs for donation, the living will legislation was again supported, and for the first time was voted onto the floor for general discussion. After certain amendments were added to the bill, we ended up supporting the clean indoor air act. We have also continued to support mandatory wearing of helmets for motorcycle riders.

Again this year, we provided an informational tour to

Senators and their staff to the University of Nebraska Medical Center in an attempt to provide Legislators with some feeling for medical education and medical practice. Also in early April, a social event was held at the Lincoln Country Club which was again well-received by all in attendance. This event has now been held twice. It seems to be something that should be pursued on a regular basis, perhaps even on an annual basis, and with this in mind, consideration should be given to regular funding by the Board of Directors. This event to date has been paid for primarily by the individual contact physicians. It is felt that the Board of Directors should take a close look at this event as budgets are prepared for subsequent years.

As usual our lobbyist, David Buntain, has worked long and hard and provided excellent support to the Commission. In addition, this year we have had the opportunity of working closely with Mr. Bruce Cutshall, who represents the Nebraska Chapter of the American Academy of Family Physicians. We acknowledge and appreciate the support of the Academy. We have also had the opportunity of working closely with the staff and lobbyist of the Nebraska Hospital Association.

Finally, many individual physicians and Auxiliary members have been very helpful in working on these issues. We have had many senatorial contacts made which have been very helpful and worthwhile. We are very appreciative of the effort expended in this regard, and wish to take this opportunity to again mention that as legislation becomes more and more pervasive in the daily practice of medicine, that it behooves as many physicians as possible to take an active interest in the legislative process.

Board of Councilors

The Annual Session meeting of the Board of Councilors was held on April 26, 1987, at the Cornhusker Hotel, Lincoln, Nebraska.

The meeting was called to order by the Chairman, Dr. Truhlsen, and roll call showed the following members present: Drs. Stanley M. Truhlsen, Howard Dinsdale, C. T. Frerichs, Roger Massie, William Chleborad, Robert Herpolsheimer, Robert Quick, Floyd Shiffermiller, Stanley Nabity, David Little, Donald Fischer, Hiram Walker and L. Dwight Cherry.

Dr. Truhlsen called for approval of the Fall Session minutes, and these were approved as printed in the December, 1986 issue of the Nebraska Medical Journal.

The Councilors reviewed the reports and resolutions contained in the Handbook, and referred these on to the House of Delegates for their action.

The requests for Life Membership were approved by the Councilors. The requests for Associate Membership were reviewed by the Councilors and were approved for referral to the House of Delegates for their action.

There was discussion concerning the fact that the By-Laws should state that the recommendation for Associate Membership should be made by the physician's local county society. It was moved that this matter be referred to the Commission on Association Affairs for clarification of the By-Laws. This was approved.

Cases received since the Fall Session were presented to the Councilors and discussed.

Dr. Dinsdale discussed the situation regarding the Burn Unit at St. Elizabeth Hospital, and the following resolution was presented:

"Confidential Hearings and Due Process"

WHEREAS, with the backing of the Nebraska Medical Association the Nebraska Legislature enacted the Hospital-Medical Liability Act which established the Commission on Medical Qualifications, and

WHEREAS, according to that law, any citizen has a right to file or refer a complaint against a physician to the Commission, and

WHEREAS, the five physician member Commission may then hold confidential preliminary hearings and make recommendations;

THEREFORE, BE IT RESOLVED, that we request granting by the Commission of confidential complete hearings at which time all parties can present their evidence, and be assured of due process.

Following discussion, the resolution was adopted by the Board of Councilors.

There being no further business, the meeting was adjourned.

House of Delegates

FIRST SESSION

The first session of the House of Delegates was held on April 26, 1987, at the Cornhusker Hotel, Lincoln, Nebraska.

The meeting was called to order by the Speaker, Dr. Armstrong. Roll call showed 76 delegates present, and the meeting was declared in session.

The following Fifty Year Practitioners were present in the House of Delegates for recognition:

Alister I. Finlayson, M.D., Omaha
Maurice D. Frazer, M.D., Lincoln
Joseph A. Longo, Sr., M.D., Omaha
Paul D. Marx, M.D., Lincoln
Harold J. Panzer, M.D., Ainsworth

The following Fifty Year Practitioners were unable to be present:

John A. Aita, M.D., Omaha
Willard C. Brinegar, M.D., Norfolk
Richard W. Gray, M.D., Lincoln
Joe T. Hanna, M.D., Scottsbluff
Charles G. Ingham, M.D., Wayne
Letteer G. H. Lewis, M.D., LaPorte, Minn.
Harry H. McCarthy, M.D., Omaha
Ralph C. Moore, M.D., Omaha
John M. Thomas, M.D., Glenwood, Ia.

The Necrology was read by Dr. Francis Donahue, Immediate Past President of the NMA.

A special presentation was made by Dr. James Dunlap to Mr. Kenneth E. Neff, former Executive Director of the NMA.

The following oral reports were given:

Robert Waldman, M.D., Dean, University of Nebraska College of Medicine
Mr. Greg Mueller, President, UNMC-NMA Medical Student Chapter

Gregg Wright, M.D., Director, State Department of Health

Mr. Phillip Essay, new President of the UNMC Student Chapter, presented the Distinguished Service Award to Robert Waldman, M.D., Dean of the University of Nebraska College of Medicine.

Dr. Armstrong called for approval of the Fall Session minutes, and these were approved as printed in the December, 1986 issue of the Nebraska Medical Journal.

The following assignments were made to Reference Committees:

REFERENCE COMMITTEE #1

Report of the Nebraska Foundation for Medical Care
Resolution #1 - Keith-Perkins-Chase Medical Society -
Sunderbruch/PRO

Resolution #2 - Keith-Perkins-Chase Medical Society -
Sunderbruch/PRO

Resolution #3 - Keith-Perkins-Chase Medical Society -
Sunderbruch/PRO

Resolution #4 - Keith-Perkins-Chase Medical Society -
Sunderbruch/PRO

Resolution #5 - Keith-Perkins-Chase Medical Society -
Sunderbruch/PRO

Resolution #6 - Keith-Perkins-Chase Medical Society -
Sunderbruch/PRO

Resolution #7 - Keith-Perkins-Chase Medical Society -
Sunderbruch/PRO

Resolution #12 - Keith-Perkins-Chase Medical Society -
Medicare

Resolution #14 - Cheyenne-Kimball-Deuel Medical
Society - Repeal of PRO Program

Resolution #16 - Metro Omaha Medical Society -
Generic Screens Under PRO

Resolution #17 - Metro Omaha Medical Society - Due
Process and the PRO

Resolution #21 - Metro Omaha Medical Society -
NMA-NFMC Relationship

Resolution #27 - S.W. Nebraska Medical Society -
PRO

Resolution #28 - S.W. Nebraska Medical Society -
Third Party Payors

Resolution #29 - Cuming County Medical Society -
PRO

Resolution #34 - Lancaster County Medical Society -
Sunderbruch Corporation

REFERENCE COMMITTEE #2

Annual Audit

Board of Directors, Item #2, Young Physicians; Item
#9, Non-Dues Income; and Budget

Life Membership/Associate Membership Requests

Report of the Ad-Hoc Committee on Medicaid Services

Resolution #33 - Lancaster County Medical Society -
Longterm Investment

REFERENCE COMMITTEE #3

Board of Directors, Item #1, Medicare; and Item #6,
AMA Medicare Assignment Proposal

Report of the Delegate to the AMA

Report of the Committee on Health Planning

Resolution #8 - Keith-Perkins-Chase Medical Society -
Medicare

Resolution #9 - Keith-Perkins-Chase Medical Society -
Medicare

Resolution #10 - Keith-Perkins-Chase Medical Society -
Medicare

Resolution #11 - Keith-Perkins-Chase Medical Society -
Medicare

Resolution #13 - Cheyenne-Kimball-Deuel Medical
Society - Define "Quality of Care"

Resolution #15 - Metro Omaha Medical Society -
Medicare Reform

Resolution #18 - Metro Omaha Medical Society -
Adolescent Health

Resolution #19 - Metro Omaha Medical Society -
AMA's AIDS Action Plan

Resolution #20 - Metro Omaha Medical Society -
Physician Payment by Diagnostic Related Groups

Resolution #22 - Metro Omaha Medical Society -
Congressional Delegation Commendation

Resolution #23 - Metro Omaha Medical Society -
Physician Interaction with Medicare

Resolution #25 - Metro Omaha Medical Society -
Cataract Surgery Fee Reduction

Resolution #26 - Metro Omaha Medical Society -
Payment by Medicare for Physician Services

Resolution #31 - C. J. Cornelius, M.D. - MAAC
Allowances

REFERENCE COMMITTEE #4

Board of Directors, Item #4, Motorcycle Helmet
Legislation; and Item #5, DPT Vaccine

Report of the State Department of Health

Report of the Ad-Hoc Committee on Maternal and
Child Health

Report of the Commission on Legislation and Govern-
mental Affairs

Resolution #24 - Metro Omaha Medical Society -
Support of Nebraska Clean Indoor Air Act

Resolution #30 - C. J. Cornelius, M.D. - Seat Belt
Legislation

REFERENCE COMMITTEE #5

Board of Directors, Item #3, Third Party/Hospital
Contracts

Report of the Commission on Association Affairs

Report of the Ad-Hoc Committee on Alternative
Health Plans

REFERENCE COMMITTEE #6

Board of Directors, Item #7, Seating of Additional
NMA Delegates; Item #8, AMA Delegates and
Alternates; and Item #10, Honorary Membership
Report of the University of Nebraska College of
Medicine

Report of the Creighton University School of Medicine

Report of the Nebraska Medical Foundation

Report of the Commission on Medical Education

Report of the Commission on Public Affairs

Report of the Scientific Sessions Committee

Report of the Ad-Hoc Committee on Health Policy
Statements

Report of the Ad-Hoc Committee on Health Education

Resolution #32 - Lancaster County Medical Society -
"Where Your Work Day Goes"

The following Nominating Committee was selected:

1st District — Dr. C. Lee Retelsdorf, Omaha

2nd District — Dr. Alan Forker, Lincoln

3rd District — Dr. George Voigtlander, Pawnee City

4th District — Dr. Roger Massie, Plainview

5th District — Dr. Ron Klutman, Columbus

6th District — Dr. Richard Pitsch, Seward

7th District — Dr. R. A. Blatny, Fairbury

8th District — Dr. Richard Raymond, O'Neill

9th District — Dr. J. R. Adamson, Grand Island

10th District — Dr. Kenneth Johnson, McCook

11th District — Dr. Berl Spencer, Ogallala

12th District — Dr. Ernest Bussinger, Scottsbluff

The following resolution was offered by Dr. Meissner:

WHEREAS, Senator Edward Zorinsky served the
citizens of Nebraska well during his lifetime, and

WHEREAS, he unselfishly served this state and the
nation in a highly-commendable manner, and

WHEREAS, he was continually concerned about the health and welfare of his constituents, and

WHEREAS, his commitment to the betterment of the state was unquestionable, and

WHEREAS, he was always receptive and responsible to communication from the Nebraska Medical Association and its members;

THEREFORE, BE IT RESOLVED, that the Nebraska Medical Association express its deep regret at his passing, and

BE IT FURTHER RESOLVED, that our sincere condolences be expressed to Mrs. Cece Zorinsky and her family.

Dr. Schenken moved that this resolution be adopted without debate, and this was unanimously adopted.

There being no further business, the House was recessed until Tuesday morning.

House of Delegates

SECOND SESSION

The Second Session of the House of Delegates was held on April 28, 1987. The meeting was called to order by the Vice Speaker, Dr. Meissner. Roll call showed 66 delegates present, and the House was declared in session.

Dr. Meissner called for approval of the minutes of the First Session of the House, and these were approved as printed.

Dr. Meissner called for approval of the minutes of the Board of Councilors, and these were approved as printed.

Mrs. Kruger, President of the NMA Auxiliary, presented the AMA-ERF checks to the two medical schools. Dr. Haller accepted the checks for Creighton University School of Medicine, and Dr. Paustian accepted the checks for the University of Nebraska College of Medicine.

Mrs. Kruger then presented an oral report of the NMA Auxiliary to the House of Delegates.

Dr. Dinsdale, President of the Nebraska Medical Foundation, presented the Student Research Scholarship Program checks to Scott Smith, University of Nebraska College of Medicine and Alan Brewer, Creighton University School of Medicine.

Reports from the Reference Committees were called for and the following were presented.

Reference Committee #1

Reference Committee #1 considered one report and sixteen resolutions. The Reference Committee submits the following report and recommendations.

(1) REPORT OF THE FOUNDATION FOR MEDICAL CARE

The report of the Foundation for Medical Care prompted prolonged discussion and explanation. Dr. Herb Reese and Dr. John Coe described the review process and the intent of the NFMC to establish a provider advisory commission. There was agreement that the review procedure incorporating due process should be published by the Nebraska Foundation for Medical Care

or the Nebraska Medical Association as very necessary information for the practicing physicians of the state. Many of the discussants stated an overview committee should be formed by the Board of Directors for the review of the PRO operations, its policies, contractual relationships and fiscal performance as regards cost/benefit within the State of Nebraska. The cost/benefit ratio determination should be assessed relative to the effect on the quality of health care in the State of Nebraska and the cost to the physician for travel and time consumed in the review process. A number of physicians praised Drs. Herb Reese and John Coe for their heavy commitment of time and effort in carrying out the intent of the PRO legislation and regulations under extremely difficult conditions.

Recommendations:

1. It is the recommendation of the Reference Committee that the report of the Nebraska Foundation for Medical Care be accepted.

2. It is recommended that an overview committee be established by the Board of Directors of the NMA to review the PRO operation, its policies, contractual relationships and fiscal performance as regards cost/benefit within the State of Nebraska.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was seconded. Discussion took place by members of the House relating to the non-renewal situation that existed when the NFMC/PRO contract with HCFA expired at the end of the first two-year period. It was also mentioned a request had been made by Dr. Cornelius that the major provisions of the 1986-88 contract be sent to each member of the House of Delegates. It was recommended these two issues be referred for review to the overview committee being recommended for establishment in the Reference Committee report. This section of the Reference Committee was adopted.

(2) RESOLUTION #1 - S.W. NEBRASKA MEDICAL SOCIETY - SUNDERBRUCH CORPORATION/PRO

RESOLUTION #2 - KEITH-PERKINS-CHASE MEDICAL SOCIETY - SUNDERBRUCH/PRO

RESOLUTION #3 - KEITH-PERKINS-CHASE MEDICAL SOCIETY - SUNDERBRUCH/PRO

RESOLUTION #4 - KEITH-PERKINS-CHASE MEDICAL SOCIETY - SUNDERBRUCH/PRO

RESOLUTION #5 - KEITH-PERKINS-CHASE MEDICAL SOCIETY - SUNDERBRUCH/PRO

RESOLUTION #6 - KEITH-PERKINS-CHASE MEDICAL SOCIETY - SUNDERBRUCH/PRO

RESOLUTION #7 - KEITH-PERKINS-CHASE MEDICAL SOCIETY - SUNDERBRUCH/PRO

RESOLUTION #34 - LANCASTER COUNTY SOCIETY - SUNDERBRUCH CORPORATION

These resolutions read as follows:

Resolution #1

WHEREAS, the Sunderbruch Corporation is required to "carefully" review charts of Medicare recipients of the State of Nebraska, and

WHEREAS, on many occasions physicians, medical record personnel, and hospital administrators receive letters alleging that the chart fails to document facts to substantiate compliance to various HCFA "screens", and

WHEREAS, the charts on many occasions do in fact show that no deviation from HCFA guidelines exists when reviewed by independent R.N.'s and medical record librarians, and

WHEREAS, this requires physicians to unnecessarily defend admissions, quality of care and other aspects of the hospital stay, and

WHEREAS, this unneeded paperwork wastes physicians time and further depletes already strained hospital resources on unneeded paperwork;

BE IT RESOLVED THAT:

- 1) The Nebraska Medical Association send letters to The Sunderbruch Corporation, Nebraska encouraging them to actually and carefully review charts.
- 2) Copies of this letter be sent to HCFA regional and national offices, the Congressional delegation and the AMA National Office.
- 3) A letter be sent to Dr. John Coe, Medical Director of the Sunderbruch Corporation, Nebraska encouraging him to take steps to ensure that his personnel actually and carefully examine all charts prior to sending letters to physicians and hospital personnel.
- 4) Further encourage Dr. Coe to retract letters that contain false and potentially damaging accusations.

Resolution #2

WHEREAS, the Nebraska Medical Association professes to represent Nebraska physicians, and

WHEREAS, Sunderbruch Corporation and Nebraska Foundation for Medical Care are raising havoc with the practicing physician and his hospital, especially the small rural hospitals, with inappropriate denials;

THEREFORE, BE IT RESOLVED, that the Nebraska Medical Association provide a watchdog committee to field and investigate complaints and render assistance to the physicians and hospitals involved and also return to being a strong advocate of the patient and the attending physician.

Resolution #3

WHEREAS, some reviewers for Sunderbruch Corporation and Nebraska Foundation for Medical Care continue to make inappropriate denials;

THEREFORE, BE IT RESOLVED, that the Nebraska Medical Association provide a watchdog committee to ferret out such reviewers and make their names known to all Nebraska physicians and the general public.

Resolution #4

WHEREAS, inappropriate denials create, for the busy practicing physician, many hours of lost time spent answering numerous inappropriate letters, driving to and from committee meetings, and attending administrative judge hearings:

THEREFORE, BE IT RESOLVED, that the Nebraska Medical Association collect data on such wasteful use of the taxpayers money and regularly provide this information to the general public.

Resolution #5

WHEREAS, the reviewer with inappropriate denials is paid at least \$45 per hour and since this is an inexcusable waste of the taxpayers money;

THEREFORE, BE IT RESOLVED, that the Nebraska Medical Association make this data and dollar cost known to the general public and make every effort through our elected representatives to change the law and prevent payment to said reviewers.

Resolution #6

WHEREAS, the Sunderbruch Corporation and the Nebraska Foundation for Medical Care have refused to provide the hospital and/or the attending physicians with the qualifications of their reviewers, such qualifications being name, specialty, years in practice, whether employed or unemployed, and address and telephone number;

THEREFORE, BE IT RESOLVED, that the Nebraska Medical Association make every effort to obtain such important information about all reviewers and see that this information is supplied to all busy practicing Nebraska physicians and their hospitals.

Resolution #7

WHEREAS, inappropriate requirements for fiscal intermediaries and Peer Review Organizations (PRO), i.e. Sunderbruch Corporation and Nebraska Foundation for Medical Care, such requirements being five dollars savings for each dollar they receive from HCFA. These requirements create more inappropriate denials;

THEREFORE, BE IT RESOLVED, that the Nebraska Medical Association make every effort to remove such irresponsible requirements.

Resolution #34

WHEREAS, The Sunderbruch Corporation has contracted with the federal government to be the peer review organization for Nebraska physicians for the intent of insuring high quality and efficient care to Medicare patients, and

WHEREAS, misunderstandings between the attending physician and reviewing physician have occurred which have hindered the PRO's performance of its duties and the ability of the attending physician to deliver appropriate medical care;

THEREFORE, BE IT RESOLVED, that the reviewing physicians identify themselves and invite attending physicians to contact them for clarification for additional information before any action is taken by the PRO which could ultimately lead to sanction of the attending physician.

There was significant discussion of these resolutions and it is recommended that an overview committee as identified above be formed to study the concerns contained within these resolutions which pertain to the PRO quality of review and performance and the cost/benefit of the entire PRO activity.

Recommendation:

It is recommended that the resolutions #1, #2, #3, #4, #5, #6, #7, and #34 be referred to an overview committee appointed by the Board of Directors of the NMA for study and that a report be submitted to the House of Delegates at its Fall Meeting in 1987 as to the results of the performance assessment.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was seconded. Discussion ensued with various members of the House requesting the Association be provided an outline of the review process being utilized by the NFMC/Sunderbruch. Representatives of the NFMC/Sunderbruch indicated that they would try to get the basic review process listed and identified, and make it available to the NMA. NFMC/Sunderbruch representatives also indicated they would research the question of providing the Association with a list of the physician reviewers who serve the PRO program in Nebraska. This section of the Reference Committee report was adopted.

- (3) RESOLUTION #12 - KEITH-PERKINS-CHASE MEDICAL SOCIETY - MEDICARE
RESOLUTION #21 - METROPOLITAN OMAHA SOCIETY - NMA-NFMC RELATIONSHIP
RESOLUTION #27 - S.W. NEBRASKA MEDICAL SOCIETY - OPPOSITION TO NMA SUPPORT OF PRO FUNCTIONS OF NFMC
RESOLUTION #28 - S.W. NEBRASKA MEDICAL SOCIETY - OPPOSITION TO NMA OFFICERS DIRECTORS, COUNCILORS, AMA DELEGATES AND ALTERNATES, NMA DELEGATES AND ALTERNATES, SALARIED NMA EMPLOYEES, SERVING AS SIMULTANEOUS EMPLOYEES OF "THIRD PARTY PAYORS" OR CONTRACTUAL SUBSIDIARIES OF "THIRD PARTY PAYORS"
RESOLUTION #29 - CUMING COUNTY SOCIETY - PRO

These resolutions read as follows:

Resolution #12

WHEREAS, the practicing physicians in Nebraska and the Nebraska Medical Association place quality patient care first and economics in a secondary position, and review organizations such as Sunderbruch Corporation and the Nebraska Foundation for Medical Care obviously have economics as their primary concern and consequently the two are dismetrically opposed;

THEREFORE, BE IT RESOLVED, that no Nebraska delegate to the Nebraska Medical Association or the American Medical Association serve in any official capacity in either review organization.

Resolution #21

WHEREAS, concerns have been expressed over the relationship between the Nebraska Medical Association (NMA) and the Nebraska Foundation for Medical Care (NFMC); and

WHEREAS, many feel that an arms length relationship between NMA and NFMC will be in the best interest of both physicians and patients; and

WHEREAS, many Nebraska physicians are and will continue to be both physicians and patients; and

WHEREAS, many Nebraska physicians are and will continue to be both NMA members and PRO receivers; therefore, be it

RESOLVED, that no current officer or director of the Nebraska Medical Association should serve simultaneously as an officer or director of the Nebraska Foundation for Medical Care.

Resolution #27

WHEREAS, it has become increasingly apparent that the Medicare program is emphasizing cost containment to the detriment of sound medical care and management in many instances, and

WHEREAS, the administrators of the Medicare program pay small heed to the advice and complaints of medical practitioners relating to the potential damage to Medicare patients engendered by arbitrary decisions and denials related to such care, and

WHEREAS, there have been obvious and demonstrable coercive attempts by the Medicare administration to force contractual participation by physicians in this program, and

WHEREAS, these coercive attempts are aimed at

forcing a form of "socialized medicine" or "National Health Program" on the medical profession, and

WHEREAS, Medicare patients and physicians alike are thus being denied their constitutional rights in a democratic and free enterprise system, and

WHEREAS, PRO as presently operating and proposed tends to unilaterally serve the fiscal and economic interests of the Federal bureaucracy inherent to the purpose and intent of the Medicare program;

BE IT THEREFORE RESOLVED, that the Nebraska Medical Association sever all relations in the attempted management of the faulted PRO program and indicate its dissatisfaction to the appropriate officers of the Nebraska Foundation for Medical Care, and

BE IT FURTHER RESOLVED, that no further monetary or moral support be provided by the Nebraska Medical Association to the Nebraska Foundation for Medical Care for purposes of promulgating such PRO functions in Nebraska.

Resolution #28

WHEREAS, physicians who represent the private practice of medicine in the State of Nebraska are encountering increasing difficulty in the administrative and fiscal management of their patients, and

WHEREAS, many of these difficulties are caused by interference in the patient-physician relationship engendered by various artificial rules and regulations promulgated by third party payors, and

WHEREAS, these rules and regulations appear aimed at reducing costs with little attention to quality and completeness of care affected or altered by such reductions in cost, and

WHEREAS, salaried employees of these third party payors will have an obvious "conflict of interest" when attempting to deal with alterations in rules, regulations, and mechanisms aimed at maintaining fiscal interests of such third party payors;

BE IT THEREFORE RESOLVED, that no elected officer of the NMA, of the NMA Board of Directors, member of the NMA Board of Councilors, AMA delegates or alternates, NMA delegates or alternates, or NMA salaried employee(s) shall be an employee of a third party payor and thus carry such "conflict of interest" inherent to his employed position, and

BE IT FURTHER RESOLVED, that any current officer of the NMA, member of the Board of Directors, member of the Board of Councilors, AMA delegate or alternate, NMA delegate or alternate, or salaried employee of the NMA now serving in such "conflict of interest" circumstance be asked to either resign their position with NMA or change their employment.

Resolution #29

WHEREAS, the cost of medicine has skyrocketed and cost containment by DRG and PRO has not met expectations, and

WHEREAS, they are supported by tax dollars, and

WHEREAS, the Sunderbruch of Iowa Corporation is a non-profit organization supported by government contract;

THEREFORE, BE IT RESOLVED, that the Sunderbruch of Iowa Corporation issue a financial statement indicating the tax dollars they are saving and the salaries of the officers, Ken Neff, Dr. John Coe, Dr. Herbert Reese and all of the physician reviewers and the non-physician reviewers and the clerical help, and

BE IT FURTHER RESOLVED, that this information be submitted to the Nebraska Medical Association, the general public and to our Congressional representatives.

All of these resolutions were studied together as they basically have the same intent. It is noted that the Board of Directors took action after the spring meeting of the House of Delegates in 1986 and adopted a policy that no Nebraska Medical Association officer or Board of Director member could serve with the Nebraska Foundation for Medical Care. The Board of Directors' action was reviewed by Reference Committee #3 at the Fall Meeting of the House of Delegates in 1986, and the action of the Board was approved by the House of Delegates. Therefore, there was no need for further action.

A second part of Resolution #27, "BE IT FURTHER RESOLVED, that no further monetary or moral support be provided by the Nebraska Medical Association to the Nebraska Foundation for Medical Care for purposes of promulgating such PRO functions in Nebraska." did not receive any significant support. There is no existing monetary support from the Nebraska Medical Association to the Nebraska Foundation for Medical Care for PRO activity at the present time from information made available to the Reference Committee. Therefore, it is recommended that the second part of Resolution #27 not be adopted.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was seconded. Dr. Cottingham said he did not feel that Resolution #28 should be considered with the other resolutions as it dealt specifically with the conflicts of interest question and not limited only to officers of the NMA or the Board of Directors. He said that his County Society wished to make substantial changes in this Resolution #28 and he moved that this resolution be extracted from this Item 3 and be discussed separately. This was approved by the House.

Dr. Cottingham moved that this altered resolution be printed for the delegates and voted at a later time in this Session. This was approved by the House.

There was discussion regarding Resolutions #12, #21, #27 and #29, and the question was asked whether the Reference Committee recommended these not be adopted. Dr. Bergman, Chairman of the Reference Committee, said it was felt by some of the Reference Committee that the resolutions not adopted as such, be looked at by the overview committee and addressed at that time and each of the points brought out and be brought back to the House of Delegates. The motion was made to refer these resolutions to the overview committee and that they report on each of these resolutions individually at the Fall Session. This was approved.

This section of the Reference Committee report was adopted as amended.

(4) RESOLUTION #14 - CHEYENNE-KIMBALL-DEUEL MEDICAL SOCIETY - REPEAL OF PRO PROGRAM

This resolution read as follows:

WHEREAS, the PRO program with the imposition

of HCFA's "generic quality screens" under the new contract has become increasingly disruptive, accusatory and intolerable, and

WHEREAS, the application of the generic screens has resulted in a veritable flood of letters to physicians which in effect accuse physicians of incompetent care because they did not follow the PRO's recipe, and

WHEREAS, the program rules permit or require the PRO to notify the patient of unfavorable rulings regarding admission denials and other decisions prior to providing any realistic opportunity for appeal by the physician involved, and

WHEREAS, the Nebraska Medical Association did in good faith attempt to work with this governmental program with its avowed intent of improving medical care for the Medicare population but now finds itself unable to support the type of review currently being carried out by the PRO; therefore be it

RESOLVED, that the Nebraska Medical Association go on record in favor of repeal of the PRO program and encourage the AMA to do the same.

This resolution was amended to read:

BE IT RESOLVED, that the Nebraska Medical Association continue to support the assurance of quality through medically-directed peer review and

BE IT FURTHER RESOLVED, that the Nebraska Medical Association go on record as favoring and promoting repeal of the PRO program and encourage the AMA to do the same.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was seconded. Dr. Garwood pointed out that in his opinion the NMA needs to remain an advocate for its members in this review process in that it would appear physicians have an adversarial relationship with the governmentally decreed review process at this point. The role of advocate could be assumed by an overview committee or the Board of Directors.

This section of the Reference Committee report was adopted by the House.

(5) RESOLUTION #16 - METROPOLITAN OMAHA SOCIETY - GENERIC SCREENS UNDER PRO

The resolution read as follows:

WHEREAS, PRO's around the nation have implemented a system of "generic screens" whereby lay reviewers evaluate the medical record on the basis of pre-established criteria; and

WHEREAS, the Chairman of the Board of the Missouri PRO recently announced that less than one percent of the cases in Missouri that fell out because of generic screens were even considered for possible deviations from quality standards; and

WHEREAS, any wasteful or nonproductive effort on the part of any medical organization to evaluate quality necessarily diverts attention away from the need to assure the patients of Nebraska are receiving high quality medical care; therefore be it

RESOLVED, that the Nebraska Medical Association encourage the American Medical Association to seek extensive modification of the HCFA generic screens; and be it

RESOLVED FURTHER, that the Nebraska Medi-

cal Association urge the American Medical Association to urge discontinuance of the utilization of generic screens if they do not prove useful or helpful in promoting high quality medical care.

This resolution was amended to read:

RESOLVED, the Nebraska Medical Association encourage the American Medical Association to seek extensive modification of the HCFA generic screens, and be it

FURTHER RESOLVED, that the Nebraska Medical Association urge the American Medical Association to urge discontinuance of the utilization of generic screens.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(6) RESOLUTION #17 - METROPOLITAN OMAHA SOCIETY - DUE PROCESS AND THE PRO

This resolution read as follows:

WHEREAS, Nebraska physicians have recently received from the Sunderbruch Corporation (Iowa PRO) and the Nebraska Foundation for Medical Care (Nebraska PRO) an outline of the goals and objectives of the PRO which include indications that sanctioning of physicians will be considered based on possible problems of quality, and

WHEREAS, the appeals process as outlined in the December, 1986 pamphlet did not meet generally accepted standards for due process, and

WHEREAS, it was not specifically stated that concerns over quality would be afforded due process appeals prior to notification of hospitals and patients; therefore be it

RESOLVED, that the Nebraska Medical Association strongly urge the Nebraska Foundation for Medical Care (Nebraska PRO) to develop a meaningful system of due process which recognizes the rights and needs of both physicians and patients.

Significant discussion was generated. It was the recommendation of the participants in the discussion that action be deferred on this issue until publication of the review procedure and due process has been accomplished. We recommend that this be referred to the overview committee.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(7) REVISED RESOLUTION #28

This resolution read as follows:

WHEREAS, physicians who represent the private practice of medicine in the State of Nebraska are encountering increasing difficulty in the administrative and fiscal management of their patients, and

WHEREAS, many of these difficulties are caused by interference in the patient-physician relationship engendered by various artificial rules and regulations established by federal legislation regarding professional review organizations, and

WHEREAS, these rules and regulations appear aimed at reducing costs with little attention to quality and completeness of care affected or altered by such reductions in cost, and

WHEREAS, substantially salaried employees (that is, those deriving greater than \$1,000 per month income) from such federal programs or contractual subsidiaries who serve in such capacity will have an overt "conflict of interest" when attempting to simultaneously serve the interests of the private practicing physician member of the Nebraska Medical Association;

BE IT THEREFORE RESOLVED, that it is the opinion of the House of Delegates that no elected officer of the NMA, of the NMA Board of Directors, member of the NMA Board of Councilors, AMA delegates or alternates, NMA delegates or alternates, or NMA salaried employee(s) should be such an employee and thus carry such "conflict of interest" inherent to his employed position, and

BE IT FURTHER RESOLVED, that any current officer of the NMA, member of the Board of Directors, member of the Board of Councilors, AMA delegate or alternate, NMA delegate or alternate, or salaried employee of the NMA now serving in such "conflict of interest" circumstance should be encouraged to either resign their position with the NMA or resign their employed position with such federal agency or contractual subsidiary.

Dr. Schenken pointed out the need for more information regarding the PRO program. He indicated it's HCFA who is making the rules and it's Medicare that started it in the first place. It is actuarially unsound, it's funded on general revenues, it interferes with the doctor-patient relationship and it's going to break this country if we are not careful. He further pointed out that if the NMA is going to select a function that members are requested to do and recommend they not fill the role due to potential controversy, it may be difficult in the future to get members to serve in difficult or controversial situations. He felt the resolution may have some merit, however, there is a lack of information available. Dr. Schenken then moved that revised Resolution #28 be referred to the Board of Directors and the overview committee with the request that a follow up report be submitted at the 1987 Fall Session. This was adopted by the House.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

MR. SPEAKER, I MOVE THE ADOPTION OF THE REFERENCE COMMITTEE #1 AS A WHOLE AS AMENDED. This was adopted by the House.

Respectfully submitted,
A. H. Bergman, M.D., Fremont-Chairman
M. Jack Mathews, M.D., Lincoln
Frederick Paustian, M.D., Omaha

Reference Committee #2

Reference Committee #2 considered six reports and one resolution. The Reference Committee submits the following report and recommendations.

(1) ANNUAL AUDIT

The Annual Audit was reviewed with the Secretary-Treasurer and the Committee recommends acceptance as presented to the Board of Directors by Dana F. Cole and Company.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(2) BOARD OF DIRECTORS, ITEM #2, YOUNG PHYSICIANS

Considerable testimony was heard from representatives of the Ad-Hoc Committee on Young Physicians toward encouraging membership in the NMA. The Ad-Hoc Committee proposed waiving dues during the year of entry into practice for young physicians, however, to participate in the benefits of membership, that is particularly to receive the state journal and all NMA mailings. The hope and anticipation then being that the new physician would desire to continue to receive these benefits and become dues paying members. This would apply to physicians entering practice for the first time following completion of residency training in June or July of any given year covering them for the last six months of the calendar year or portion thereof.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(3) BOARD OF DIRECTORS, ITEM #9, NON-DUES INCOME

The Committee heard considerable testimony favoring generation of non-dues income to help curtail further increases in dues to the NMA. Specific proposals included the NMA sponsoring a distinctive credit card available only to NMA members through the FirstTier Bank. NMA is to receive one-half percent credit of total billings. Also, another proposed source of income to be from a Medical Payment Systems, Inc. under sponsorship of the AMA. This system is currently accepted by Medicare and about 90 insurance companies. NMA would provide instructional support. The Committee considers non-dues income a viable option and recommends authorization to the Board of Director to proceed with their efforts and implementation of viable programs.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(4) BOARD OF DIRECTORS, BUDGET

The Committee recommends the budget be accepted as presented and also wishes to commend Dr. Shapiro and his committee for their time and efforts in preparing the budget.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(5) LIFE MEMBERSHIP/ASSOCIATE MEMBERSHIP REQUESTS

These requests are as follows:

LIFE MEMBERSHIP REQUESTS

ADAMS COUNTY MEDICAL SOCIETY

Elmer G. Glenn, M.D., Hastings

BOX BUTTE COUNTY MEDICAL SOCIETY

Robert J. Morgan, M.D., Rapid City, S.D.

BUFFALO COUNTY MEDICAL SOCIETY

Elliott Chappell, M.D., Kearney

CHEYENNE-KIMBALL-DEUEL MEDICAL SOCIETY

Chris U. Bitner, M.D., Sidney

DODGE COUNTY MEDICAL SOCIETY

Louis Gilbert, M.D., Cedar Bluffs

FIVE COUNTY MEDICAL SOCIETY

Walter Benthack, M.D., Wayne

JEFFERSON COUNTY MEDICAL SOCIETY

William Yoachim, M.D., Fairbury

LANCASTER COUNTY MEDICAL SOCIETY

Jon T. Williams, M.D., Lincoln

METRO OMAHA MEDICAL SOCIETY

Alfred C. Anderson, M.D., Omaha

William C. Boelter, M.D., Omaha

Ralph L. Cassel, M.D., Omaha

Francis Donahue, M.D., Omaha

Louise Eaton, M.D., Omaha

John R. Eisenach, M.D., Omaha

Robert L. Grissom, M.D., Omaha

Leo Heywood, M.D., Omaha

Frank J. Iwersen, M.D., Omaha

Henry Kammandel, M.D., Omaha

James R. Kovarik, M.D., Omaha

Robert Langdon, Sr., M.D., Omaha

John A. Rasmussen, M.D., Omaha

Herbert B. Saichek, M.D., Omaha

Won Tai Sohn, M.D., Omaha

Sallie F. Sun, M.D., Omaha

SALINE COUNTY MEDICAL SOCIETY

Clarence Zimmer, M.D., Friend

SCOTTS BLUFF COUNTY MEDICAL SOCIETY

James D. Hayhurst, M.D., Scottsbluff

SOUTHWEST NEBRASKA MEDICAL SOCIETY

John L. Batty, M.D., McCook

WASHINGTON-BURT COUNTY MEDICAL SOCIETY

R. F. Sievers, M.D., Blair

YORK COUNTY MEDICAL SOCIETY

James D. Bell, M.D., York

ASSOCIATE MEMBERSHIP REQUESTS

NORTHEAST NEBRASKA MEDICAL SOCIETY

Roger Cutshall, M.D., Winside

Frank McClanahan, M.D., Neligh

LANCASTER COUNTY MEDICAL SOCIETY

Warren Q. Bradley, M.D., Lincoln

HOLT & NORTHWEST NEBRASKA SOCIETY

Floyd Shiffermiller, M.D., Ainsworth

Testimony was heard regarding coordination of eligibility for Life Membership between counties, state and AMA medical organizations. The Committee recommends a continued study be made by the Board of Directors to bring this more in concert for these organizations. The Committee approves the acceptance of all members as listed for Life Membership/Associate Membership.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(6) REPORT OF THE AD-HOC COMMITTEE ON MEDICAID SERVICES

Testimony was presented pointing out the inadvertent deletion of a physician's name from the names listed in the first paragraph. The Committee recommends the addition of the name of Dr. Dale Ebers for his important contributions to this report. The last sentence would read, "In particular, Dr. Chris Wright, Laura Rigg, R.M., Bob Seiffert, Gary Cheloa, and Dr. Dale Ebers represented the Department and contributed to the deliberations." With this addition, the Committee recommends acceptance of the report as written.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(7) RESOLUTION #33 - LANCASTER COUNTY MEDICAL SOCIETY - LONGTERM INVESTMENT

This resolution read as follows:

WHEREAS, the page of the audit for "Budget Years Ended December 31, 1986 and 1985" indicated the amount of rent expense for the Headquarters Office at \$32,270 for 1986;

THEREFORE BE IT RESOLVED, that the Board of Directors of the Nebraska Medical Association consider the possibility of purchasing property for the Nebraska Medical Association to be used as office space and meeting space, and

BE IT FURTHER RESOLVED, that the above Board report on the status of this resolution at the 1987 Fall Session of the House of Delegates.

Testimony was heard calling attention to the relatively large amount of expenditure for rent and favoring diverting that expense toward ownership of a facility by the NMA. The Committee recommends the Board of Directors address this issue and bring their recommendations to the Fall Meeting of the House of Delegates.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

MR. SPEAKER, I MOVE THE ADOPTION OF THE REPORT OF YOUR REFERENCE COMMITTEE #2 AS A WHOLE. This was adopted by the House.

Respectfully submitted,
Stanley Nabity, M.D., Grand Island -
Chairman
John Reed, M.D., Lincoln
Barbara Heywood, M.D., Papillion

Reference Committee #3

Reference Committee #3 considered four reports and fourteen resolutions. The Reference Committee submits the following report and recommendations.

(1) BOARD OF DIRECTORS, ITEM #1, MEDICARE

This section dealt with the meetings of the Board of Directors with the third party carrier, Iowa Blue Cross/Blue Shield to send a delegation to the Fall Meeting to meet with members of the House. We further recommend that this be publicized to all members of the NMA and we recommend that the NMA delegates solicit questions and problems from the constituents and that time be allowed specifically at this meeting for discussion with these representatives of Blue Cross/Blue Shield.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(2) BOARD OF DIRECTORS, ITEM #6, AMA MEDICARE ASSIGNMENT PROPOSAL

This section dealt with the AMA Medicare assignment proposal. We felt that this subject was also covered by Reference Committee #5 when they discussed the report of the Commission on Association Affairs, and thought that no further action was necessary.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(3) DELEGATE TO THE AMA

We received the report with additional information from Dr. Cornelius. There was considerable discussion on these important matters. We recommend that extra attention be given to AMA Resolution #99: "RESOLVED, that the American Medical Association recommended that physicians be sure to include the use of tobacco products as a contributing factor on death certificates whenever warranted by their clinical judgment."

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(4) REPORT OF THE COMMITTEE ON HEALTH PLANNING

We recommend that this be accepted as submitted.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(5) RESOLUTION #8 - KEITH-PERKINS-CHASE MEDICAL SOCIETY - MEDICARE

This resolution read as follows:

WHEREAS, there is a three tiered rate across the State of Nebraska resulting in marked inequity of payment to rural physicians and hospitals;

THEREFORE, BE IT RESOLVED, that the Nebraska Medical Association oppose such inequities.

There was considerable discussion about this and agreement that the following should be submitted with the amendment attached:

WHEREAS, there is a three-tiered rate across the State of Nebraska resulting in marked inequity of payment to rural physicians and hospitals;

THEREFORE, BE IT RESOLVED, that the Nebraska Medical Association oppose such inequities and that the Board of Directors study this matter and refer it to the appropriate committee or commission, or if necessary, form an ad-hoc committee.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was seconded. Discussion took place indicating problems being faced by rural hospitals. Dr. Schenken pointed out that he felt it important that focus be placed on the economic health of smaller communities and the situation of their small hospitals as well. This section was adopted by the House.

(6) RESOLUTION #9 - KEITH-PERKINS-CHASE MEDICAL SOCIETY - MEDICARE

This resolution read as follows:

WHEREAS, the federal government has refused to pay for photocopying of patient charts, and

WHEREAS, such reimbursement is now being made in the State of Wisconsin;

THEREFORE, BE IT RESOLVED, that the Nebraska Medical Association make known its support of such reimbursement to all Nebraska Hospitals.

During discussion of this matter, it was felt the problem is being resolved and that further action concerning it would not be needed. We recommend this not be adopted.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(7) RESOLUTION #10 - KEITH-PERKINS-CHASE MEDICAL SOCIETY - MEDICARE

This resolution read as follows:

WHEREAS, the federal government has passed a law to require hospital reimbursement of radiologists, anesthesiologists and pathologists;

THEREFORE, BE IT RESOLVED, that the

Nebraska Medical Association make known its strong opposition to this legislation.

We would like to submit this in the following substitute resolution:

WHEREAS, the federal government has proposed legislation to require hospital reimbursement of radiologists, anesthesiologists, and pathologists;

THEREFORE, BE IT RESOLVED, that the Nebraska Medical Association make its strong opposition to this legislation known to the Nebraska Congressional delegation.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(8) RESOLUTION #11 - KEITH-PERKINS-CHASE MEDICAL SOCIETY - MEDICARE

This resolution read as follows:

WHEREAS, effective October 1, 1987, when a nonparticipating physician provides services on an unassigned basis which are determined by a carrier or a peer review organization to be medically unnecessary; the physician is required to refund any amounts collected from the beneficiary within 30 days after receiving notice that the services were determined to be medically unnecessary, or within 15 days after receiving notice of an adverse determination upon reconsideration or appeal;

THEREFORE, BE IT RESOLVED, that the Nebraska Medical Association make known its strong opposition to this federal law and the fact that this is an abridgement of the physician's constitutional rights.

Resolution #11 concerning refunding payments from beneficiaries when services are deemed unnecessary was heard and there was much discussion concerning this resolution and although the resolution speaks to a very important question, we felt that it was in need of further study before we could recommend any action on it. There was some questions concerning the legality of this problem as well as possible public relations problems raised by the resolution in its present form, specifically that were this adopted, it would appear that we would be endorsing payment for unnecessary services. The Reference Committee and discussants realized that this was not the intent of this resolution. We therefore, recommend that this resolution be referred to the Board of Directors for further study because of its legal implications and other ramifications.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(9) RESOLUTION #13 - CHEYENNE-KIMBALL-DEUEL MEDICAL SOCIETY - DEFINE "QUALITY OF CARE"

This resolution read as follows:

WHEREAS, there is currently no consensus definition of "quality" as it applies to medical care, and

WHEREAS, the PRO and other programs have developed regulations based on "process" alone for determining what is or is not quality medical care, and

WHEREAS, it is becoming increasingly important for the medical community to have a working definition of "quality" medical care; therefore be it

RESOLVED, that the NMA request the AMA to

develop a consensus definition of or a method for measuring quality in health care delivery.

We recommend that this resolution be accepted as written.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(10) RESOLUTION #15 - METRO OMAHA MEDICAL SOCIETY - MEDICARE REFORM

This resolution read as follows:

RESOLVED, that the Nebraska Medical Association support the general concepts embodied in AMA's Report MM (A-86) calling for comprehensive structural reforms in the current Medicare program and emphasizing expanded private initiatives and continued physician and patient freedom of choice; and be it

RESOLVED FURTHER, that the Nebraska Medical Association oppose any proposals for addition of catastrophic coverage to the current Medicare program which do not address the fundamental structural flaws in the Medicare program upon which the catastrophic coverage is added.

We recommend that this resolution be accepted as written.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(11) RESOLUTION #18 - METRO OMAHA MEDICAL SOCIETY - ADOLESCENT HEALTH

This resolution read as follows:

WHEREAS, public concerns about the health of adolescents have often taken the backseat to those about the elderly, the newborn, etc.; and

WHEREAS, adolescents are experiencing serious problems with teenage pregnancy, drug and alcohol abuse, suicide, trauma, emotional disturbances, etc.; therefore be it

RESOLVED, that the Nebraska Medical Association commend the American Medical Association for identifying the problems of adolescent health as a major concern of the association; and be it

RESOLVED FURTHER, that the Nebraska Medical Association support all appropriate efforts within the state to assist in resolving this complex problem.

We recommend that this resolution be accepted as written.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(12) RESOLUTION #19 - METRO OMAHA MEDICAL SOCIETY - AMA'S AID ACTION PLAN

This resolution read as follows:

WHEREAS, the AIDS epidemic is sweeping the world and there is little evidence of abatement in the near future, and

WHEREAS, significant advances have occurred such as providing a blood supply as free as humanly possible from contamination by the AIDS virus, and

WHEREAS, a large number of concerns still exist

among physicians, patients, the public educators, government, etc.; therefore be it

RESOLVED, that the Nebraska Medical Association strongly support the efforts of the American Medical Association and commend it for developing its comprehensive, coordinated action plan for helping the nation deal with this serious problem.

We recommend that this resolution be accepted as written.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(13) RESOLUTION #20 - METRO OMAHA MEDICAL SOCIETY - PHYSICIAN PAYMENT BY DIAGNOSTIC RELATED GROUPS

This resolution read as follows:

WHEREAS, the Federal Office of Management and Budget has in the past several months first proposed that all physician payments under Medicare be paid through a so called MD-DRG; and

WHEREAS, the same Office of Management and Budget has now suggested that only pathologists, anesthesiologists be included in such a MD-DRG; and

WHEREAS, payment of hospitals utilizing the DRG system were never designed taking physician fees in mind and currently contain great inequities based on the severity of illness and intensity of services provided within a single DRG; and

WHEREAS, numerous federal studies of the MD-DRG proposal including one recently by the Office of Technology Assessment have raised grave philosophical and practical concerns about the concept of MD-DRGs; and

WHEREAS, any inclusion of any physician in a DRG payment raises serious question about conflict of interest and would seriously compromise the ability of a physician to be totally committed to the interest of the patient; therefore be it

RESOLVED, that the Nebraska Medical Association reaffirm its opposition to the inclusion of any physician's services under an MD-DRG.

There was considerable discussion about this. It was the consensus of those present that this problem was being addressed by the AMA and that further action by the Nebraska Medical Association, was, perhaps, unnecessary. We therefore, recommend that this resolution not be adopted.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(14) RESOLUTION #22 - METRO OMAHA MEDICAL SOCIETY - CONGRESSIONAL DELEGATION COMMENDATION

This resolution read as follows:

WHEREAS, proposals to create a so called MD-DRG will create a potential conflict of interest between physicians and their patients, and

WHEREAS, the entire Nebraska Congressional delegation has signed the House and Senate resolutions indicating that it is the sense of the Congress that payment of physicians by the DRG system is undesirable and should not be instituted, therefore be it

RESOLVED, that the Nebraska Medical Association commend our Congressional delegation for their support.

There was considerable discussion about this and we felt that the words, "that it is the sense of the Congress" be deleted so that the substitute resolution reads:

WHEREAS, proposals to create a so called MD-DRG will create a potential conflict of interest between physicians and their patients, and

WHEREAS, the entire Nebraska Congressional delegation has signed the House and Senate resolutions indicating that payment of physicians by the DRG system is undesirable and should not be instituted; therefore be it

RESOLVED, that the Nebraska Medical Association commend our Congressional delegation for their support.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(15) RESOLUTION #23 - METRO OMAHA MEDICAL SOCIETY - PHYSICIAN INTERACTION WITH MEDICARE

This resolution read as follows:

WHEREAS, Medicare reimbursement for Nebraska physician services continues to be processed by Iowa Blue Cross/Blue Shield, which forms the guidelines of the Iowa Foundation for Medical Care, and

WHEREAS, major problems in processing claims and providing adequate compensation for Nebraska physicians and for Medicare patients **continue**; therefore be it

RESOLVED, that the Nebraska Medical Association direct its leadership and Executive Director to develop further expertise and resource people to provide detailed support and guidelines for physicians in their dealings with Medicare.

There was considerable discussion concerning this and it was felt that the substitute resolution be recommended below:

WHEREAS, Medicare reimbursement for Nebraska physicians services continues to be processed by Iowa Blue Cross/Blue Shield, which forms the guidelines of the Iowa Foundation for Medical Care, and

WHEREAS, major problems in processing claims and providing adequate compensation for Nebraska physicians and for Medicare patients **continue**; therefore be it

RESOLVED, that the Nebraska Medical Association Board of Directors and Executive Director develop further expertise and resource people to provide detailed support and guidelines for physicians in their dealings with Medicare.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was seconded. Dr. Hartman commented that he thought it important that the Association develop resource people who can assist members in questions arising regarding Medicare reimbursement for physicians. Dr. Cornelius commented that there are such resource people on various company payrolls who could be called upon for expertise they could provide when a physician or an NMA Commission/Com-

mittee has a question. This section was adopted by the House.

(16) RESOLUTION #25 - METRO OMAHA MEDICAL SOCIETY - CATARACT SURGERRY FEE REDUCTION

This resolution read as follows:

WHEREAS, HCFA is in the process of re-evaluating the overall cost of physician's services and hospital care, and

WHEREAS, in 1986 HCFA reduced cataract surgery fees by 10%, and

WHEREAS, HCFA, in 1987, desires to further reduce these fees by an additional 13%;

BE IT RESOLVED, that the Nebraska Medical Association go on record as opposed to reduction in the fees to certain physicians (hospital based) and also reduction of fees for certain procedures, and

BE IT FURTHER RESOLVED, that this action be forwarded to the Nebraska Medical Association Delegates to the American Medical Association House of Delegates and to Nebraska's Congressional Delegation.

We recommend that this resolution be accepted as written.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(17) RESOLUTION #26 - METRO OMAHA MEDICAL SOCIETY - PAYMENT BY MEDICARE FOR PHYSICIAN SERVICES

This resolution read as follows:

WHEREAS, the present system of payment of Medicare claims by Iowa Blue Cross/Blue Shield is frequently erroneous, inadequately administered, and poorly understood, and

WHEREAS, physicians for their part are threatened with major fines in the case of proper billing;

THEREFORE, BE IT RESOLVED, that the Nebraska Medical Association strongly encourage Iowa Blue Cross/Blue Shield - Medicare to furnish adequate 800 telephone lines for ready communication, and

BE IT FURTHER RESOLVED, that sensible and knowledgeable individuals be retained by Iowa Blue Cross/Blue Shield - Medicare to process Medicare claims in the first instance and to be available by way of said phone lines to make explanation of the processing of these claims, and

BE IT FURTHER RESOLVED, that Iowa Blue Cross/Blue Shield - Medicare be requested to supply each physician with a step-by-step outline of the process used by Medicare to determine the MAAC for each physician and directions as to how these charges may be used by the physician, and additionally, that each physician be supplied with a step-by-step outline of the process used by Medicare to determine the amount of the billing which Medicare designed to "approve" for payment.

After considerable discussion, it was felt that this resolution should be accepted as written.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS

SECTION OF OUR REPORT. This was adopted by the House.

(18) RESOLUTION #31 - C.J. CORNELIUS, M.D. - MAAC ALLOWANCES

This resolution read as follows:

WHEREAS, the Congress directed HCFA to institute charge limitations for services provided the Medicare patients by physicians in addition to the previously imposed fee freeze of 1984, and

WHEREAS, there are significant penalties specified in the law for each and every "overcharge" identified by HCFA, and

WHEREAS, the use of the formula provided by Iowa Blue Cross and Blue Shield may result in charges different from those computed by the fiscal intermediary, and

WHEREAS, the charge data on which the MAAC is computed by Iowa Blue Cross/Blue Shield was based on the four-digit code system used by Mutual of Omaha, the previous intermediary, which resulted in combining more than one CPT 4 five-digit code under a single four-digit number rendering the base period charges inaccurate in many instances, and

WHEREAS, the only way to know what the MAAC for any given procedure code is to have it calculated by the intermediary;

THEREFORE, BE IT RESOLVED, that the NMA encourage its member physicians to request MAAC figures from Iowa Blue Cross/Blue Shield for each and every procedure that they perform or service that they render.

There was quite a bit of discussion concerning this also with further explanation of the spirit of this resolution by Dr. Cornelius. We recommend that it be accepted as written.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

MR. SPEAKER, I MOVE THE ADOPTION OF THE REPORT OF YOUR REFERENCE COMMITTEE #3 AS A WHOLE. This was adopted by the House.

Respectfully submitted,
George Voigtlander, M.D., Pawnee City -
Chairman
Kenton Shaffer, M.D., Kearney
Richard Svehla, M.D., Omaha

Reference Committee #4

Reference Committee #4 considered five reports and two resolutions. Your Reference Committee submits the following report and recommendations.

(1) BOARD OF DIRECTORS, ITEM #4, MOTORCYCLE HELMET LEGISLATION

The Nebraska Medical Association directed its support for requiring motorcycle helmet use. This bill is on general file in the Nebraska Legislature and will be held over for consideration in the 1988 legislative session. We reaffirm our support for requiring motorcycle helmet use.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(2) BOARD OF DIRECTORS, ITEM #5, DPT VACCINE

The subject of DPT vaccination and its increased cost of delivery was referred to the Ad-Hoc Committee on Maternal and Child for consideration. This subject will be discussed with that report.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(3) REPORT OF THE STATE DEPARTMENT OF HEALTH

Discussion was heard concerning credentialing and licensure of radiologic and laboratory services. Current legislation is now being debated in the Nebraska Legislature. It is apparent that office labs will have to document quality control in the future. Testing of x-ray personnel and equipment for competency appears imminent. Discussion also took place concerning metabolic screening of infants, day-care license requirements, and water testing. The subject of restructuring the Emergency Medical Services program received little discussion.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(4) REPORT OF THE AD-HOC COMMITTEE ON MATERNAL AND CHILD HEALTH

The Ad-Hoc Committee has report actions on the federal level with cooperation of private industry in order to satisfy the problem of supply of DPT vaccine as well as the liability problem. It appears that actions at the state level will not be necessary at this time. Reorganization is taking place at the state level of government to address the issues of perinatal mortality and of medically-handicapped children.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(5) REPORT OF THE COMMISSION ON LEGISLATION AND GOVERNMENTAL AFFAIRS

The report of the Commission on Legislation and Governmental Affairs was reviewed. Discussion took place regarding the importance of legislator contacts and activities devoted to improving the relationships between the state legislature and the Nebraska Medical Association. The Commission requested the Board of Directors to consider budgeting for continued social events. Discussion continued in reference to the proposed legislation for licensing of radiologic services as well as laboratory services. It appears that the general direction concerning the licensing of these services will be that records will be required that assure quality standards in the delivery of these services. Comment was heard expressing appreciation for the tremendous efforts of the members of this Commission.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(6) RESOLUTION #24 - METRO OMAHA MEDICAL SOCIETY - SUPPORT OF NEBRASKA CLEAN INDOOR AIR ACT

This resolution read as follows:

WHEREAS, involuntary smoking is a cause of disease, including lung cancer in healthy nonsmokers and increased respiratory infections in children, and

WHEREAS, simple separation of smokers and nonsmokers within the same air space may reduce but not eliminate exposure of nonsmokers to environmental tobacco smoke;

BE IT RESOLVED, that the Nebraska Medical Association support LB 95 which strengthens the Nebraska Clean Indoor Air Act by requiring (1) proprietors to designate nonsmoking areas in public places; (2) requiring employers to implement written smoking policies which allow employees to designate their work areas as nonsmoking areas and which prohibit smoking in most common areas; (3) prohibiting retaliation by employers against employees who assist in enforcing the Act; (4) imposing a fine on proprietors and employers who violate the Act.

There is no dissent from your Reference Committee concerning this resolution.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT AND TO REQUEST APPROVAL OF THIS RESOLUTION. This was adopted by the House.

(7) RESOLUTION #30 - C. J. CORNELIUS, M.D. - SEAT BELT LEGISLATION

This resolution read as follows:

WHEREAS, there is little doubt that the use of seat belts in motor vehicles saves lives and reduces injury in vehicular accidents, and

WHEREAS, the recently-passed federal legislation permitting an increase in speed in rural interstate highways from 55 to 65 MPH will result in an increase in injury potential due to the higher vehicular speed, and

WHEREAS, the long-term care of badly injured persons is borne by the various health care communities (local, insurance plans, Medicaid, Medicare, etc.) and not solely by the person sustaining the injury, and

WHEREAS, the cost morbidity and mortality associated with motor vehicles can be markedly reduced by the wearing of seat belts, and

WHEREAS, if the NMA had waged a vigorous campaign for retention of the seat belt law it might not have been voted out of existence;

THEREFORE, BE IT RESOLVED, that the NMA enlist the aid of the NMA Auxiliary in developing an action plan for passage of a meaningful seat belt usage law in the State of Nebraska.

Discussion took place concerning the fact that the seat belt legislation is indeed a public issue with significant public financial consequences. It is more than an individual freedom issue. The Reference Committee requests approval of this resolution.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

MR. SPEAKER, I MOVE THE ADOPTION OF THE REPORT OF REFERENCE COMMITTEE #4 AS A WHOLE. This was adopted by the House.

Respectfully submitted,
Jon J. Hinrichs, M.D., Lincoln - Chairman
John D. Griffiths, M.D., Omaha
David Little, M.D., Hastings

Reference Committee #5

Reference Committee #5 consisted of three reports. The Reference Committee submits the following report and recommendations.

(1) BOARD OF DIRECTORS, ITEM #3, THIRD PARTY/HOSPITAL CONTRACTS.

The Board discussed a resolution which was passed at the 1986 Fall Session directing the Association to study the policies and practices of third party carriers and develop a policy statement defining our professional opinion on these policies and practices for consideration at this session of the House of Delegates. This matter was referred to the Ad-Hoc Committee on Health Policy Statements for development of an NMA position on this issue.

Recommendation:

The Reference Committee recommends the acceptance of this report for information.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(2) REPORT OF THE COMMISSION ON ASSOCIATION AFFAIRS

A discussion of this report revealed that the Auxiliary of the Association is doing an exemplary job and deserves all the support the NMA can give it. The Student Chapter, likewise, is very active and deserves our support also.

The Commission recommends to the House of Delegates an amendment to the By-Laws which would provide that the AMA Delegates and Alternates once duly elected, would automatically hold a seat in the House of Delegates of the NMA with voting privileges. This was felt to be in the best interests of the NMA to have a close working relationship to the AMA. This would increase the House seating by the number of Delegates and Alternate Delegates allotted to the NMA to the American Medical Association. It would also give the county with an AMA Delegate or an Alternate an additional seat.

The Young Physicians Section of the NMA is now in development and the Board recommends that they also be given Delegate and Alternate Delegate's seats with a vote. The Commission feels that the immediate past president be given a seat with a vote by a change in the By-Laws stating in effect that the By-Laws should be altered to allow the immediate past president to be a member of the House of Delegates with a vote. The other past presidents living in the state would continue as ex-officio members of the House of Delegates without vote.

The AMA proposal for local societies to develop formal programs asking physicians to accept assignment from Medicare beneficiaries whose economic situations dictate the need for this assistance was discussed. The Commission felt that in Nebraska, most persons needing care receive it whether or not they can pay for it and that frequently it is better to render care to these people without fanfare in a public relations event. It was felt that this form of program is not needed in Nebraska and that all physicians should be urged to follow their consciences in a spirit of charity to their fellow man.

Recommendations:

1. Letters of commendation be sent from the President of the NMA to the Auxiliary of the NMA and the University of Nebraska Chapter citing them for their past work.

2. The recommendations of the Commission on Association Affairs be accepted as written.

3 The NMA membership continue to render care to all patients including Medicare patients with due charity and humility as in the past.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was seconded. Drs. Little and Cornelius addressed the idea that the Association should develop data to indicate the amount of uncompensated care that is provided by physicians. Dr. Urbauer agreed that the concept of attempting to establish some documentation in this area would be important and moved to amend the report by asking the Board of Directors to investigate some mechanism whereby the amount of uncompensated care provided by Nebraska physicians can be identified. This was approved by the House, and this section of the Reference Committee report was adopted as amended.

(3) REPORT OF THE AD-HOC COMMITTEE ON ALTERNATIVE HEALTH PLANS

This Committee has not had to take any specific actions. Several contracts have been reviewed through their legal firm. They will continue to serve in this posture as needed.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

MR. SPEAKER, I MOVE THE ADOPTION OF THE REPORT OF YOUR REFERENCE COMMITTEE #5 AS A WHOLE AS AMENDED. This was adopted by the House.

Respectfully submitted,
John F. Fitzgibbons, M.D., Omaha -
Chairman
K. C. Bagby, M.D., Blair
Donald Fischer, M.D., North Platte

Reference Committee #6

Reference Committee #6 considered 11 reports and one resolution. The Reference Committee submits the following report and recommendations.

(1) BOARD OF DIRECTORS, ITEM #7, SEATING OF ADDITIONAL NMA DELEGATES

This item was taken for information purposes and noted that the Commission on Association Affairs was also assigned the same item of consideration and was fully discussed in their report in the Handbook and was covered by Reference Committee #4.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(2) BOARD OF DIRECTORS, ITEM #8, AMA DELEGATES AND ALTERNATES

Testimony was heard from Dr. Roffman regarding the AMA Delegates pointing out that the increased number from three to four is in an extremely precarious situation being only in effect by some 18 members as noted in this report. It would seem prudent for the NMA to carry out the recommendations of the Board of Directors and allow the President, the President-Elect, and the Secretary-Treasurer to serve as Alternate Delegates for the 1987 calendar year. The situation can be reassessed at the

November, 1987, meeting and if there is need to elect an Alternate Delegate based on the membership at that time, this can then be reconsidered.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(3) BOARD OF DIRECTORS, ITEM #10 - HONORARY MEMBERSHIP

The Committee wholeheartedly recommends the election by the House of Delegates of the former Executive Director, Kenneth Neff, to honorary membership in the Nebraska Medical Association.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(4) REPORT OF UNIVERSITY OF NEBRASKA COLLEGE OF MEDICINE

No testimony was heard on this report and the report is accepted as submitted. Note is taken from Dr. Waldman's oral report that the Department of Psychiatry at the University is indeed viable and growing.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(5) REPORT OF CREIGHTON UNIVERSITY SCHOOL OF MEDICINE

No testimony was heard on this report. The report is accepted as submitted.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(6) REPORT OF NEBRASKA MEDICAL FOUNDATION

The report was reviewed and accepted as written. The Foundation is again to be complimented upon the very excellent job they have done in all of the various programs they have undertaken on behalf of the Nebraska Medical Association. Special note was taken of the contribution to the Tumor Registry and it is hoped through this effort that a coordinated program of the Health Department and the Nebraska Medical Association will evolve in a continued functioning Nebraska Tumor Registry that will endure.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(7) REPORT OF COMMISSION ON MEDICAL EDUCATION

The report is received as submitted with no additional input and the Commission is to be complemented on their ongoing review of the various programs within the State of Nebraska.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(8) REPORT OF COMMISSION ON PUBLIC AFFAIRS - RESOLUTION #32 - LANCASTER COUNTY MEDICAL SOCIETY - "WHERE YOUR WORK DAY GOES"

The resolution read as follows:

WHEREAS, the attached chart (below) indicated the amount of time a typical worker works in an eight-hour work day for various items;

THEREFORE BE IT RESOLVED, that the Commission on Public Affairs of the Nebraska Medical Association call attention to the ranking of medical care in relation to the other items.

Rank Order		# Minutes
#	Item	
1	Federal Taxes	106
2	Housing	87
3	Food	60
4	State/Local Taxes	57
5	Other	45
6	Transportation	42
7	Medical Care	39
8	Clothing	23
9	Recreation	21

Source: The Tax Foundation

This report was considered along with Resolution #32 from Lancaster County Medical Society. It was thought that the ongoing efforts of this Commission should be encouraged and efforts be continued to bring health oriented issues before the public through the radio, the press, and any other methods available. The item submitted by the Lancaster County from the Lincoln Journal Star is a good example of how medical issues can be circulated to the public and this item would be well-placed in a number of the publications across the state.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(9) REPORT OF SCIENTIFIC SESSIONS COMMITTEE

The report is received as submitted and the Committee is to be complimented on their expedience in changing the format as directed by the House of Delegates at the last meeting. It would be of interest perhaps at the Fall Meeting if the Committee could report on attendance at the various functions as compared to prior years.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(10) REPORT OF AD-HOC COMMITTEE ON HEALTH POLICY STATEMENTS

Some discussion was held regarding the report of the Health Policy Statements Committee regarding smoking. It was felt that to endeavor for a smoke-free environment was desirable. The present health policy statement was too restrictive to be functional, as for example the statement reads that the Nebraska Medical Association will prohibit smoking at any and all NMA functions, it will prohibit smoking by NMA officers and personnel while acting officially on behalf of the NMA, etc. It was the Reference Committee's feeling that smoking would have to be stopped through education rather than through prohibition, accordingly, the Reference Committee did not feel it could recommend adoption of the policy statement as submitted though we recognize that many of the facts included in the statement are true. Other areas needed to be better defined or clarified to make it an action item for adoption by the House of Delegates.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was seconded. Dr. Retelsdorf indicated that the Reference Committee report did not deal with the first policy statement in his report, "Other Health Care Practitioners". Dr. Meissner called for a motion to accept this policy statement, and this statement was adopted by the House.

There was considerable discussion on the policy statement, "Smoking". It was the opinion that smoking should be prohibited at scientific meetings, House of Delegate meetings, etc., but that it was too restrictive to ask people not to smoke at social events such as Fun Night, etc.

Dr. Cornelius moved that smoking be prohibited at all of the things as recommended by the Committee on Health Policy Statements, with the exception of social functions of the NMA, as the policy of the House until the Committee comes back at the 1987 Fall Session with a revised policy statement for consideration. This was approved by the House. This section of the Reference Committee report was adopted as amended.

(11) REPORT OF AD-HOC COMMITTEE ON HEALTH EDUCATION

Testimony was heard from Dr. Bosley regarding the functions of this Committee over the past year regarding their involvement with members of the Nebraska School Board Association and other educators in the items of health education. Particular attention has been given to the health and life of school age children. It is the Committee's intent to develop a policy statement that will represent the feeling of the Nebraska Medical Association toward our role in coordinating programs on a healthier, more satisfactory life for our younger people. Dr. Bosley felt that the Committee could develop this by the fall meeting.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

MR. SPEAKER, I MOVE THE ADOPTION OF THE REPORT OF YOUR REFERENCE COMMITTEE #6 AS A WHOLE AS AMENDED. This was adopted by the House.

Respectfully submitted,
William Rumbolz, M.D., Omaha -
Chairman
Michael Wilkins, M.D., Lincoln
Thomas Wallace, M.D., Gordon

Dr. Cornelius said that he had received a publication from the AMA dated April, 1987, which gives a short background and information regarding the AMA proposals for physician reimbursement. He said it would be helpful if it were in the hands of all members of the House

of Delegates. He proposed that the Association obtain this publication for each member of the House of Delegates if the cost was not prohibitive.

Dr. Truhlsen, who just completed his two terms as Councilor for the First District, received a note of thanks from the House of Delegates for his service.

There being no further business, the meeting was recessed.

House of Delegates

THIRD SESSION

The Third Session of the House of Delegates was held April 28, 1987. The meeting was called to order by the Speaker, Dr. Armstrong. Roll call showed 66 delegates present, and the House was declared in session.

Dr. Armstrong called for the report of the Nominating Committee, and Dr. Retelsdorf, Chairman, presented the following slate:

President-Elect —

C. A. MWhorter, M.D., Omaha

Board of Directors, At-Large —

Paul E. Collicott, M.D., Lincoln

Delegate to the AMA —

Carl J. Cornelius, M.D., Sidney

Alternate Delegate to the AMA —

Louis J. Gogela, M.D., Lincoln

Secretary-Treasurer —

Robert F. Shapiro, M.D., Lincoln

Councilors —

1st District - Richard Svehla, M.D., Omaha

2nd District - Sushil Lacy, M.D., Lincoln

3rd District - C. T. Frerichs, M.D., Beatrice

4th District - Roger Massie, M.D., Plainview

Council on Professional Ethics —

Charles Ashby, M.D., Geneva

Dale Ebers, M.D., Lincoln

There were no other nominations from the floor and the motion was made to adopt the slate as presented. This was adopted unanimously.

There being no further business, the meeting was adjourned.

Picture Gallery

NEBRASKA MEDICAL ASSOCIATION

1987
Annual Session



Dr. Christine Wright addressing an NMA general session.



Dr. Hiram Walker presenting an honorary membership to former Executive Director, Kenneth Neff.



Kenneth Neff addressing the Fun Night - Sportsman's Day Banquet.



Dr. Donald Waltemath presenting Sportsman's Day awards at the Fun Night - Sportsman's Day Banquet.



Dr. Jerald Schenken addressing an NMA general session.



Dr. Sushil Lacy presiding at the Fun Night - Sportsman's Day Banquet.



Dr. Richard Meissner, Vice-Speaker, presiding during the House of Delegates.



Medical Student, Phil Essay presenting the Distinguished Service Award to Dr. Robert Waldman, Dean, University of Nebraska College of Medicine.



Dr. Howard Dinsdale presenting Nebraska Medical Foundation Student Research Scholarship check to Allan Brewer, Creighton University School of Medicine.



Dr. Hiram Walker addressing the House of Delegates.



Dr. Howard Dinsdale presenting Nebraska Medical Foundation Student Research Scholarship check to Scott Smith, University of Nebraska College of Medicine.



Mrs. Bev Kruger presenting AMA/ERF check to Dr. Frederick Paustian, University of Nebraska College of Medicine.



Dr. A. H. Bergman presenting the report of Reference Committee #1.



Mrs. Bev Kruger presenting AMA/ERF check to Dr. Michael Haller, Creighton University School of Medicine.



Dr. Stanley Nabity presenting the report of Reference Committee #2.



Dr. George Voigtlander presenting the report of Reference Committee #3.



Dr. Jon Hinrichs presenting the report of Reference Committee #4.



Dr. John Fitzgibbons presenting the report of Reference Committee #5.



Dr. William Rumbolz presenting the report of Reference Committee #6.



Dr. Jerald Schenken speaks to a question before the House of Delegates.



Dr. James Dunlap presenting a report to the House of Delegates.



1987-1988 NMA President-Elect, Dr. Charles A. McWhorter being escorted to the podium by Drs. Stanley Truhlsen and John Coe.



Dr. L. Dwight Cherry, President, congratulates Dr. Charles A. McWhorter, President-Elect.

Motrin[®] 800mg TABLETS

ibuprofen



Extra strength
Convenience
Economy



A Century
of Caring
1886-1986

ANNOUNCING NEW



All the advantages of cephalexin in a convenient tablet form

- Backed by over 15 years of clinical experience
- Smaller tablet is specially shaped and coated for easier swallowing
- May enhance patient compliance, particularly among the elderly
- Tablet dosage form may be appreciated by patients of all ages

NEW Keflet Tablets are available as:



Keflet is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-sensitive patients.

Brief Summary: Consult the package literature for prescribing information.
Indications and Usage: Keflet™ Tablets (cephalexin, Dista) are indicated for the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Respiratory tract infections caused by *Streptococcus pneumoniae* and group A β hemolytic streptococci (Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. Keflet is generally effective in the eradication of streptococci from the nasopharynx, however, substantial data establishing the efficacy of Keflet in the subsequent prevention of rheumatic fever are not available at present.)

Otitis media due to *S. pneumoniae*, *Haemophilus influenzae*, staphylococci, streptococci, and *Neisseria catarrhalis*.

Skin and skin structure infections caused by staphylococci and/or streptococci.

Bone infections caused by staphylococci and/or *Proteus mirabilis*. Genitourinary tract infections, including acute prostatitis, caused by *Escherichia coli*, *P. mirabilis*, and *Klebsiella sp*.

Notes: Culture and susceptibility tests should be initiated prior to and during therapy. Renal function studies should be performed when indicated.

Contraindication: Keflet is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: BEFORE CEPHALEXIN THERAPY IS INSTITUTED, CAREFUL INQUIRY SHOULD BE MADE CONCERNING PREVIOUS HYPERSENSITIVITY REACTIONS TO CEPHALOSPORINS AND PENICILLIN. CEPHALOSPORIN C DERIVATIVES SHOULD BE GIVEN CAUTIOUSLY TO PENICILLIN SENSITIVE PATIENTS.

SERIOUS ACUTE HYPERSENSITIVITY REACTIONS MAY REQUIRE EPINEPHRINE AND OTHER EMERGENCY MEASURES.

There is some clinical and laboratory evidence of partial cross allergenicity of the penicillins and the cephalosporins. Patients have been reported to have had severe reactions (including anaphylaxis) to both drugs.

Any patient who has demonstrated some form of allergy, particularly to drugs, should receive antibiotics cautiously. No exception should be made with regard to Keflet.

Pseudomembranous colitis has been reported with virtually all broad spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins); therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening.

Treatment with broad spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic associated colitis.

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic associated pseudomembranous colitis produced by *C. difficile*. Other causes of colitis should be ruled out.

Usage in Pregnancy: Safety of this product for use during pregnancy has not been established.

Precautions: *General:* Patients should be followed carefully so that any side effects or unusual manifestations of drug idiosyncrasy may be detected. If an allergic reaction to Keflet occurs, the drug should be discontinued and the patient treated with the usual agents (eg, epinephrine or other pressor amines, antihistamines, or corticosteroids).

Prolonged use of Keflet may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Keflet should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

Indicated surgical procedures should be performed in conjunction with antibiotic therapy.

As a result of administration of Keflet, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinistix® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Broad spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy—Pregnancy Category B—The daily oral administration of cephalexin to rats in doses of 250 or 500 mg/kg prior to and during pregnancy, or to rats and mice during the period of organogenesis only, had no adverse effect on fertility, fetal viability, fetal weight, or litter size. Note that the safety of cephalexin during pregnancy in humans has not been established.

Cephalexin showed no enhanced toxicity in weanling and newborn rats as compared with adult animals. Nevertheless, because the studies in humans cannot rule out the possibility of harm, Keflet should be used during pregnancy only if clearly needed.

Nursing Mothers: The excretion of cephalexin in the milk increased up to 4 hours after a 500-mg dose, the drug reached a maximum level of 4 µg/mL, then decreased gradually, and had disappeared 8 hours after administration. Caution should be exercised when Keflet is administered to a nursing woman.

Adverse Reactions: Gastrointestinal: Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely. The most frequent side effect has been diarrhea. It was very rarely severe enough to warrant cessation of therapy. Dyspepsia and abdominal pain have also occurred. As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.

Hypersensitivity: Allergic reactions in the form of rash, urticaria, angioedema, and, rarely, erythema multiforme, Stevens Johnson Syndrome, or toxic epidermal necrolysis have been observed. These reactions usually subsided upon discontinuation of the drug. Anaphylaxis has also been reported.

Other reactions have included genital and anal pruritus, genital moniliasis, vaginitis and vaginal discharge, dizziness, fatigue, and headache. Eosinophilia, neutropenia, thrombocytopenia, and slight elevations in SGOT and SGPT have been reported.

PV 2211 DPP

Additional information available to the profession on request from

Dista Products Company
Division of Eli Lilly and Company
Indianapolis, Indiana 46285
Mfd by Eli Lilly Industries, Inc.
Carolina, Puerto Rico 00630

AMA News Notes

(continued from page 8-A)

mitted to consult privately with a physician without their parents being informed.

Those findings were revealed in an AMA survey of 1,000 physicians and 1,506 adults. Results were published in the June 5 issue of the AMERICAN MEDICAL NEWS.

The level of attitudinal support for confidentiality of adolescent patient visits declined significantly, however, when the same question was posed regarding youngsters aged 12 to 14. Slightly more than half (54%) of the physicians and 65% of the adult public said that adolescents in that age range should not be entitled to confidentiality of their visits.

In another finding of the survey nearly 70% of the public shared the belief that their community needs a health clinic which would provide health care services to adolescents for problems such as alcohol and drug abuse, mental health, sexual problems and birth control. Only 22% disagreed. An overwhelming 87% of the physicians who responded said they would refer adolescents experiencing these problems to such community clinics.

* * *

The AMA once again is urging physicians to relay their experiences, both positive and negative, with Peer Review Organizations (PROs).

The PRO Monitoring Project in AMA's Dept. of Health Care Review is collecting information on PROs to keep abreast of developments in the federal program. All communications to the AMA's monitoring project will be kept confidential.

* * *

The case for instituting a ban on tobacco advertising in women's magazines was presented at a Washington, D.C. press conference called by the American Public Health Association.

Approximately 40 major national organizations have supported the position that advertising of tobacco products in women's magazines should be halted.

(continued on page 21-A)

FAMOUS PHYSICIANS ARE SHOWING UP FOR OUR 40th YEAR CELEBRATION.



Paul P. Griffin, M.D.
Robert G. Petersdorf, M.D.
Eric A. Ravitz, D.O.
J. Jerry Rodos, D.O.
Professor H.E. de Wardener, C.B.E.

Read Every Issue From Cover to Cover:

July

Symposium: Skeletal Problems

Special Article: Orthopedics 1947-1987 Paul P. Griffin, M.D.

August

Symposium: Infectious Diseases

Special Article: Infectious Diseases 1947-1987 Robert G. Petersdorf, M.D.

September 1

Symposium: Focus on Osteopathic Medicine Eric A. Ravitz, D.O.

Coordinator

Special Article: Osteopathic Medicine 1947-1987 J. Jerry Rodos, D.O.

September 15

Symposium: Renal Disease

Special Article: Renal Disease 1947-1987 Professor H.E. de Wardener, C.B.E.

40-YEAR
**Postgraduate
Medicine**

Every Issue is a Celebration of Clinical Information

Nebraska Medical Association Officers and Commissions

OFFICERS

L. Dwight Cherry, M.D., Lincoln.....President
C. A. McWhorter, M.D., Omaha.....President-Elect
Robert F. Shapiro, M.D., Lincoln.....Secretary-Treasurer
William L. Schellpeper, Lincoln.....Executive Director
James K. Ruigh, Lincoln.....Assistant Executive Director

AMA Delegates — C. J. Cornelius, Jr., M.D., Sidney;
John D. Coe, M.D., Omaha; Louis J. Gogela, M.D.,
Lincoln; Blaine Y. Roffman, M.D., Omaha.

BOARD OF DIRECTORS

L. Dwight Cherry, M.D., Kearney.....Chairman
C. A. McWhorter, M.D., Omaha.....Vice-Chairman
Robert F. Shapiro, M.D., Lincoln.....Secretary-Treasurer
Hiram N. Walker, M.D., Kearney.....Past President
Paul E. Collicott, M.D., Lincoln.....Lincoln
Richard A. Raymond, M.D., O'Neill
Donald J. Pavelka, M.D., Omaha
Richard H. Meissner, M.D., Omaha
Harry R. McFadden, M.D., ProTem.....Omaha
C. T. Frerichs, M.D., Beatrice

Roger D. Mason, M.D., Omaha
Margaret A. Moravec, M.D., Lincoln
Richard H. Meissner, M.D., Omaha
Dwayne J. Peetz, Jr., M.D., Omaha
Layton F. Rikkers, M.D., Omaha
Sebastian J. Troia, M.D., Omaha

COMMISSION ON ASSOCIATION AFFAIRS

Harry W. McFadden, M.D., Chairman.....Omaha
R. A. Blatny, M.D., Fairbury
Stuart P. Embury, M.D., Holdrege
Joel T. Johnson, M.D., Kearney
Bernard L. Kratochvil, M.D., Omaha
Walter O'Donohue, M.D., Omaha
Herbert E. Reese, M.D., Lincoln
Joseph E. Sticher, M.D., Lincoln
R. C. Weldon, M.D., Nebraska City

SCIENTIFIC SESSIONS COMMITTEE

Sushil A. Lacy, M.D., Chairman.....Lincoln
Mark A. Christensen, M.D., Convention Chairman.....Omaha
David L. Bacon, M.D., Kearney
Robert A. Beer, M.D., Omaha
Mark A. Christensen, M.D., Omaha
Richard A. Hranac, M.D., Kearney
Donald J. Larson, M.D., Lincoln
Richard M. Tempero, M.D., Omaha
Donald E. Waltemath, M.D., Lincoln
Rick J. Windle, M.D., Lincoln
Richard S. Yates, M.D., Lincoln
Eugene M. Zweiback, M.D., Omaha

COMMISSION ON MEDICAL SERVICES

William L. Rumbolz, M.D., Chairman.....Omaha
Carl J. Cornelius, Jr., M.D., Sidney
Richard A. Hranac, M.D., Kearney
F. William Karrer, M.D., Omaha
Dale E. Michels, M.D., Lincoln
Merton Quaife, M.D., Omaha
Kenton L. Shaffer, M.D., Kearney

AD-HOC COMMITTEE ON MATERNAL & CHILD HEALTH

Kenton L. Shaffer, M.D., Chairman.....Kearney

Section on Maternal Mortality Review

George M. Adam, M.D., Hastings
James G. Cummins, M.D., Omaha
L. Palmer Johnson, M.D., Lincoln
Gary D. Milius, M.D., Lincoln
William F. Rayburn, M.D., Omaha
William L. Rumbolz, M.D., Omaha
Larry Wilson, M.D., Gothenburg

Section on Perinatal Mortality Review

Lawrence C. Bausch, M.D., Lincoln
Stacie R. Bleicher, M.D., Lincoln
Robert M. Nelson, M.D., Omaha
Gregg F. Wright, M.D., Lincoln

AD-HOC COMMITTEE ON GERIATRICS

Richard A. Hranac, M.D., Chairman.....Kearney
Ronald L. Asher, M.D., North Platte
James Carraher, M.D., Lincoln
J. Whitney Kelley, M.D., Omaha
Jane F. Potter, M.D., Omaha
Richard Thompson, M.D., Lincoln
John A. Ursick, M.D., Omaha
Vernon G. Ward, M.D., Omaha

AD-HOC COMMITTEE ON ALTERNATE HEALTH PLANS

Dale E. Michels, M.D., Chairman.....Lincoln
Lonnie S. Albers, M.D., Lincoln
Vernon F. Garwood, M.D., Lincoln
Robert L. Haag, M.D., Lincoln
Michael J. Haller, M.D., Omaha

COMMITTEE ON HEALTH PLANNING

Carl J. Cornelius, Jr., M.D., Chairman.....Sidney
Gordon D. Adams, M.D., Norfolk
Lewiston W. Birkmann, M.D., Lincoln
James S. Carson, M.D., McCook
Chris C. Caudill, M.D., Lincoln
Allen D. Dvorak, M.D., Omaha
Dale W. Ebers, M.D., Lincoln
Louis J. Gogela, Jr., M.D., Beatrice
Roger D. Mason, M.D., Omaha
Donald F. Prince, M.D., Minden
C. Lee Retelsdorf, M.D., Omaha
Thomas H. Wallace, M.D., Gordon

AD-HOC COMMITTEE ON TUMOR REGISTRY

F. William Karrer, M.D., Chairman.....Omaha
Elvin G. Brown, M.D., Hastings
John H. Casey, M.D., Lincoln
James R. Commers, M.D., Omaha
Sushil S. Lacy, M.D., Lincoln
Donald R. Owen, M.D., Omaha
C. Lee Retelsdorf, M.D., Omaha
Ron D. Scott, M.D., Kearney

AD-HOC COMMITTEE ON LOW LEVEL

RADIATION WASTE DISPOSAL

Merton A. Quaife, M.D., Chairman.....Omaha
Prentiss M. Dettman, M.D., Lincoln
Allen D. Dvorak, M.D., Omaha
David J. Hoelting, M.D., Pender
Ernest O. Jones, Ph.D., Omaha
Martin R. Lohff, M.D., Omaha
W. E. Lundak, M.D., Lincoln
William H. Northwall, M.D., Kearney
Jerald R. Schenken, M.D., Omaha

COMMISSION ON LEGISLATION

AND GOVERNMENTAL AFFAIRS

Ronald L. Klutzman, M.D., Chairman.....Columbus
Robert G. Osborne, M.D., Vice-Chairman.....Lincoln
Rodney S. W. Basler, M.D., Lincoln
Judith A. Butler, M.D., Superior
James H. Dunlap, M.D., Norfolk
Dale W. Ebers, M.D., Lincoln
Richard D. Fitch, M.D., O'Neill
Charles Gregorius, M.D., Lincoln
Bruce W. Henricks, M.D., Fremont
Barbara M. Heywood, M.D., Papillion
Mark R. Hutchins, M.D., Lincoln
Max W. Linder, M.D., Lincoln
Ann E. Lott, M.D., Lincoln
John T. McGreer, III, M.D., Lincoln
Dennis G. O'Leary, M.D., Omaha
Dwayne J. Peetz, M.D., Neligh
Herbert E. Reese, M.D., Lincoln
C. Lee Retelsdorf, M.D., Omaha
Blaine Y. Roffman, M.D., Omaha
Jerald R. Schenken, M.D., Omaha
Todd S. Sorensen, M.D., Scottsbluff
Richard B. Svehla, M.D., Omaha
Timothy O. Wahl, M.D., Omaha

AD-HOC COMMITTEE ON HEALTH POLICY STATEMENTS

C. Lee Retelsdorf, M.D., Chairman.....Omaha
Daniel S. Durrie, M.D., Omaha
Joel T. Johnson, M.D., Kearney
Darroll J. Loschen, M.D., York
Dale E. Michels, M.D., Lincoln
Stanley F. Nabity, M.D., Grand Island
John F. Porterfield, M.D., Lincoln
Gerald Rounsberg, M.D., North Platte
Charles S. Wilson, M.D., Lincoln

AD-HOC COMMITTEE ON PROFESSIONAL LIABILITY

James H. Dunlap, M.D., Chairman Norfolk
David L. Bacon, M.D. Kearney
Warren G. Bosley, M.D. Grand Island
Ernest W. Chupp, M.D. Omaha
F. M. Gawecki, M.D. Papillion
Dwayne J. Peetz, M.D. Neligh
Richard M. Pitsch, Jr., M.D. Lincoln
Herbert E. Reese, M.D. Lincoln
Blaine Y. Roffman, M.D. Omaha

COMMISSION ON MEDICAL EDUCATION

Frederick F. Paustian, M.D., Chairman Omaha
Robert L. Bass, M.D. Elkhorn
Warren G. Bosley, M.D. Grand Island
Patrick E. Brookhouser, M.D. Omaha
Charles F. Damico, M.D. Hastings
Charles A. Dobry, M.D. Omaha
A. Dean Gilg, M.D. Lincoln
William E. Lundak, M.D. Lincoln
Richard L. O'Brien, M.D. Omaha
Dwayne J. Peetz, Jr., M.D. Omaha
Joseph C. Scott, M.D. Omaha
Robert H. Waldman, M.D. Omaha

AD-HOC COMMITTEE ON HEALTH EDUCATION & ATHLETIC MEDICINE

Warren G. Bosley, M.D., Chairman Grand Island
Patrick E. Clare, M.D., Vice-Chairman Lincoln
Richard W. Hammer, M.D. Lincoln
Stephen J. Lanspa, M.D. Omaha
Morris B. Mellon, M.D. Omaha
Paul H. Phillips, M.D. Scottsbluff
Richard A. Raymond, M.D. O'Neill
Eileen C. Vautravers, M.D. Lincoln
Hobart E. Wallace, M.D. Lincoln
Wesley G. Wilhelm, M.D. Omaha
Gregg F. Wright, M.D. Lincoln

COMMISSION ON PUBLIC AFFAIRS

Rodney S. W. Basler, M.D., Chairman Lincoln
H. Jeffrey Deeths, M.D. Omaha
Herbert D. Feidler, M.D. Norfolk
Edward E. Gatz, M.D. Omaha
Donald T. Glow, M.D. Omaha
John J. Hoelsing, M.D. Omaha
Roger P. Massie, M.D. Plainview
Donald E. Matthews, M.D. Lincoln
Harlan C. Shriner, M.D. Lincoln
F. Thomas Waring, M.D. Fremont

COMMISSION ON HOSPITAL MEDICAL STAFF

Glen F. Lau, M.D., Chairman Lincoln
Charles Heider, Jr., M.D. North Platte
Harry E. Keig, M.D. Papillion
Barney B. Rees, M.D. Omaha
Joseph G. Rogers, M.D. Lincoln
Larry D. Ruth, M.D. Lincoln
Steven A. Schwid, M.D. Omaha
Jerry K. Seiler, M.D. Hastings
William A. Shiffermiller, M.D. Omaha
Stephen D. Torpy, M.D. Omaha

AD-HOC COMMITTEE ON HEALTH GALLERY

Russell L. Gorthey, M.D., Chairman Lincoln
Warren G. Bosley, M.D. Grand Island
Glen F. Lau, M.D. Lincoln
Richard C. Olney, M.D. Lincoln
John L. Reed, M.D. Lincoln
Stanley M. Truhlsen, M.D. Omaha

AD-HOC COMMITTEE ON YOUNG PHYSICIANS

Richard A. Raymond, M.D., Chairman O'Neill
Gary W. Barth, M.D. Hastings
John I. Cherry, M.D. Lincoln
Norman Grosbach, M.D. Omaha
Herbert A. Hartman, Jr., M.D. Omaha
Katherine A. Keifer, M.D. Kearney
Jeanette L. Masek, M.D. Lincoln
Kirk B. Muffly, M.D. Omaha
Timothy P. O'Holleran, M.D. North Platte
Mark D. Pilley, M.D. Omaha
Bradley D. Rodgers, M.D. North Platte
William A. Shiffermiller, M.D. Omaha
Vincent J. Sutton, M.D. Hastings

NMA PRO OVERVIEW COMMITTEE

M. Jack Mathews, M.D., Chairman Lincoln
David Bacon, M.D. Kearney
Steven T. Bailey, M.D. Omaha
A. H. Bergman, M.D. Fremont
Dennis M. Connolly, M.D. Lincoln
Carl J. Cornelius, Jr., M.D. Sidney
Richard A. Cottingham, M.D. McCook
Francis D. Donahue, M.D. Omaha
Daniel S. Durrie, M.D. Omaha
John F. Fitzgibbons, M.D. Omaha
C. T. Frerichs, M.D. Beatrice
Gordon J. Hrnicek, M.D. Grand Island
Frederick F. Paustian, M.D. Omaha
Richard A. Raymond, M.D. O'Neill
Herbert E. Reese, M.D. Lincoln

AD-HOC COMMITTEE RE: BLUE SHIELD OF IOWA-MEDICARE

Paul E. Collicott, M.D., Chairman Lincoln
Steve Brase Lincoln
Thomas M. Connors, M.D. Omaha
Bob Gallion Lincoln
Vernon Garwood, M.D. Lincoln
Louis J. Gogela, Jr., M.D. Beatrice
Roger Massie, M.D. Plainview
Mrs. Janice Olson Lincoln
Donald Pavelka, M.D. Omaha
Richard B. Svehla, M.D. Omaha
Hiram R. Walker, M.D. Kearney

AD-HOC COMMITTEE ON MEDICAID SERVICES

Chris C. Caudill, M.D., Chairman Lincoln
Judith A. Butler, M.D. Superior
Dale W. Ebers, M.D. Lincoln
Russell L. Gorthey, M.D. Lincoln
Roger A. Jacobs, M.D. Seward
Ronald Klutman, M.D. Columbus
Harold M. Nordlund, M.D. York
Richard B. Svehla, M.D. Omaha
M. Allen Tompkins, M.D. Grand Island
Craig L. Urbauer, M.D. Lincoln

NEBRASKA MEDICAL ASSOCIATION

Dates to Remember

1987 Fall Session
September 10-12, 1987

120th Annual Session
April 29-May 3, 1988

ORGANIZATIONS, STATE

- American Cancer Society, Nebraska Division, Inc.**
Don W. McClure, Exec. Vice President
8502 West Center Rd., P.O. Box 241255, Omaha 68124-5255
- American Diabetes Association — Nebraska Affiliate, Inc.**
Ron Van Ryswyk, Executive Director
7377 Pacific St., Ste. 216A, Omaha 68114
- American Heart Association, Nebraska Affiliate**
Dennis N. Nissen, Executive Director
3624 Farnam St., Omaha 68131
- American Lung Association of Nebraska**
8901 Indian Hills Dr., Ste. 107, Omaha 68114
- American Red Cross**
P.O. Box 83267
1701 "E" St., Lincoln 68501
- Arthritis Foundation, Nebraska Chapter, Inc.**
Mrs. Ellen Wright, Exec. Director
2229 N. 91st Court, Omaha 68134
- Blue Cross and Blue Shield of Nebraska**
Wm. H. Heavey, President
P.O. Box 3248, Main Station, Omaha 68180
- Creighton University School of Medicine**
Richard O'Brien, M.D., Dean
California at 24th St., Omaha 68178
- Cystic Fibrosis Foundation, Nebraska Chapter**
Charles R. Bercaw, Exec. Director
5017 Leavenworth St., Omaha 68106
- Dairy Council of Central States, Inc.**
Suite 103, Hillcrest Bldg.
76th & Main, Ralston 68127
- Division of Rehabilitation Services**
Nebraska Department of Education
6th Floor, 301 Centennial Mall South, Lincoln 68509
- Division of Rehabilitation Services for the Visually Impaired**
James S. Nyman, Ph.D., Director
4600 Valley Road, Lincoln 68510
- Easter Seal Society of Nebraska**
Mrs. Letitia K. Simmons, Executive Director
3015 North 90th St., #6, Omaha 68134
- Health Manpower Referral Service, State of Nebraska**
3rd Floor, State Office, 301 Centennial Mall South, Lincoln 68509
- Lincoln Council on Alcoholism and Drugs, Inc.**
Room 212, 215 Centennial Mall, Lincoln 68508
- March of Dimes — Birth Defects Foundation**
1618 L Street, Lincoln 68508
- MID-PLAINS POISON CONTROL CENTER**
Childrens Memorial Hospital, 8301 Dodge St., Omaha 68114
(402) 390-5400 or 800-642-9999 (toll free Nebraska)
- Missouri Valley Dermatologic Society**
Richard Q. Crotty, M.D., Secretary
7822 Davenport St., Omaha 68114
- Muscular Dystrophy Association**
1912 No. 90th St., Lower Level, Omaha 68114
- National Kidney Foundation of Nebraska**
Karen Engelsman, Executive Director
2217 No. 91st Plaza, Omaha 68134
(402) 397-9234 — NE toll free 800-642-1255
- National Multiple Sclerosis Society — Nebraska-Iowa Midlands Chapter**
3624 Leavenworth, Omaha 68105
- National Society to Prevent Blindness, Nebraska Affiliate**
120 North 69th St., Suite 203, Omaha 68132-2720
- Nebraska Academy of Ophthalmology**
Mylan VanNewkirk, M.D., President
329 West 40th, Scottsbluff 69361
- Nebraska Academy of Otolaryngology**
Michael Crawford, M.D., President
201 Ridge St., #311, Council Bluffs, IA 51501
- Nebraska Allergy Society**
Linda B. Ford, M.D., President
401 E. Gold Coast Rd., Papillion 68128
- Nebraska Association of Medical Assistants, Inc.**
Marie Madison, President
405 East Stolley Park Rd., Grand Island 68801
- Nebraska Association of Nuclear Physicians, Inc.**
Merton A. Quaife, M.D., President
Dept. of Radiology, UNMC - 42nd & Dewey Ave., Omaha 68105
- Nebraska Association of Pathologists**
Joseph Rapoport, M.D., President
6901 No. 72nd St., Omaha 68122
- Nebraska Chapter — American Academy of Family Physicians**
David H. Filipi, M.D., Secretary-Treasurer
Mrs. Phyllis G. Hansen, Executive Secretary
River City Office Park, #202, 401 N. 117th, Omaha 68154
- Nebraska Chapter — American Academy of Physician Assistants**
Joe E. Jeter, P.A.-C, President
P.O. Box 397, North Bend 68649
- Nebraska Chapter — American Academy of Pediatrics**
H. J. Kuehn, M.D., Chairman
8300 Dodge St., #219, Omaha 68114
- Nebraska Chapter, American College of Cardiology**
Syed M. Mohiuddin, M.D., Governor
601 No. 30th St., Omaha 68131
- Nebraska Chapter — American College of Emergency Physicians**
Richard L. Keller, M.D., President
9641 No. 29th, Omaha 68112
- Nebraska Chapter — American College of Physicians**
Frederick F. Paustian, M.D., F.A.C.P., Governor
UNMC - 42nd & Dewey Ave., Omaha 68105
- Nebraska Chapter — American College of Surgeons**
Louis J. Gogels, M.D., Past President
2221 South 17th St., Lincoln 68502
- Nebraska Chapter of Myasthenia Gravis Foundation**
John F. Aita, M.D., Medical Advisor
105 So. 49th St., Omaha 68132
- Nebraska Dental Association**
Barry Rosa, Executive Director
134 So. 13th St., Suite 1007, Lincoln 68508
- Nebraska Dietetic Association**
Linda O. Young, M.S., R.D., President
University of NE - 214 Ruth, Levertown Hall, Lincoln 68503
- Nebraska Health Care Association**
Sandra H. Hockley, Executive Director
3100 "O" St., Ste. 7, Lincoln 68510
- Nebraska Hospital Association**
Harlan Heald, President
Box 94833, 1335 "L" St., Lincoln 68509
- Nebraska League for Nursing**
Priscilla Allen, R.N., President
Box 126, Daykin 68338
- Nebraska Medical Association**
William L. Schellpeper, Executive Director
1512 First Tier Bank Bldg., Lincoln 68508
- Nebraska Medical Foundation**
William L. Schellpeper, Secretary
1512 First Tier Bank Bldg., Lincoln 68508
- Nebraska Nurses Association**
Mary Ann Sak, Executive Director
Suite 711, Terminal Bldg., Lincoln 68508
- Nebraska Orthopaedic Society**
Ronald Schwab, M.D., Secretary
2300 South 13th St., Lincoln 68502
- Nebraska Perinatal Organization**
Joy Jacobs, R.N., Secretary-Treasurer
St. Elizabeth Community Health Center - Labor & Del. Dpt.,
566 So. 70th St., Lincoln 68510
- Nebraska Pharmacists Association**
Tom R. Dolan, R.P., Executive Director
600 So. 12th, Lincoln 68508
- Nebraska Psychiatric Society, District Branch of the American Psychiatric Association**
John Y. Donaldson, M.D., President
6901 No. 72nd St., Omaha 68122
- Nebraska Public Health Association**
President, N.P.H.A.
P.O. Box 94813, Lincoln 68509
- Nebraska Radiological Society**
Terrence R. Rusthoven, M.D., President
2112 Faidley, Grand Island 68801
- Nebraska Rheumatism Association**
Arthur L. Weaver, M.D., President
2121 South 56th St., Lincoln 68506
- Nebraska Section, American College of Obstetricians & Gynecologists**
Larry E. Roffman, M.D.
800 Doctors Bldg., Omaha 68131
- Nebraska Society of Anesthesiologists**
K. Reed Peters, M.D., President
1512 First Tier Bank Bldg., Lincoln 68508
- Nebraska Society of Internal Medicine**
Vernon Garwood, M.D., President
120 Wedgewood Drive, Suite A, Lincoln 68510
- Nebraska Society for Respiratory Therapy**
Lynn Lamprecht, RRT, President
Mem. Hospital of Dodge Co., 450 E. 23rd St.
- Nebraska State Department of Health**
Gregg Wright, M.D., Director of Health
P.O. Box 95007, 301 Centennial Mall South, Lincoln 68509
- Nebraska State Obstetric and Gynecology Society**
Dennis D. Beavers, M.D., Secretary-Treasurer
720 No. 87th St., Omaha 68114
- Nebraska Stroke Foundation**
Karyl Newman, President
P.O. Box 67004, Lincoln 68506
- Nebraska Urological Association**
Charles F. Damico, M.D., F.A.C.S., President
2115 No. Kansas, Hastings 68901
- Nebraska Veterinary Medical Association**
Don Ellerbee, Executive Director
209 West 9th St., Hastings 68901
- Omaha Mid-West Clinical Society**
Ms. Lorraine E. Seibel, Executive Secretary
7363 Pacific St., #205-B, Omaha 68114
- United Cerebral Palsy of Lancaster County, Inc.**
Jane Hoffart, Client Services Rep.
P.O. Box 80103, Lincoln 68501
- University of Nebraska Medical Center**
Charles E. Andrews, M.D., Chancellor
42nd & Dewey Ave., Omaha 68105

AMA News Notes

(continued from page 17-A)

Representing the AMA was Dorothy Starr, M.D., a pathologist who is the District of Columbia's Alternate Delegate to the AMA. She cited the many reasons why the AMA's House of Delegates adopted its strong policy position to impose a tobacco advertising ban in the national health interest.

* * *

AMA membership is up, according to the latest data from the Division of Membership.

James W. Coursey, AMA vice president for professional relations and membership, announced in a report that, by mid-May, the AMA had made "solid gains", achieving 76.6% of 1987 membership goals. This is slightly better than the 76.1% pace of this time last year, he said, and membership goals are higher this year than last year.

As of mid-May, there were 186,856 dues-paying AMA members, compared to 179,248 at that time last year, a difference of 7,608 more new members. According to the report:

* A total of 143,758 members were in the regular category, which registered a 5.5% increase over the same period last year.

* At the end of 1986, 52% of all medical students were AMA members.

* At the end of 1986, AMA membership accounted for 43.4% of the entire medical population (physicians and medical students).

In analyzing the statistics, Coursey said some gains were due to physicians wanting to take advantage of tax deductions for dues. Taking that into account, he said the increase was "still more than we expected."

* * *

THE NAVAL RESERVE NEED YOU!

The Naval Reserve is actively seeking Physicians due to the expanded requirements of the military Fleet Hospital Program. All medical specialties are needed, particularly Surgeons and Anesthesiologists.

Alter your Practice routine by serving your country as a Naval Officer.

We offer:

- Flexibility in drill schedule
- 4 days' pay for 2 days' work
- Educational loan repayment program
- Continuing Medical Education (CME)
- The opportunity to travel and do something special
- Contact (913) 764-3664

ADVERTISER'S INDEX

A	
Auto-Med	13
Ayerst Laboratories	9, 10, 11, 12
D	
Donley Medical Supply	6
F	
Family Practice Recertification	7
I	
Info-Builders	8
L	
Eli Lilly & Company	16
M	
Marion Laboratories	3, 4
N	
Naval Reserve Readiness Command	21
Norfolk Printing Company	6
P	
Postgraduate Medicine	17
R	
Republic Health Corp.	8
Roche Laboratories	23, 24
U	
U.S. Air Force	14
Upjohn Company	15

Physicians' Classified

Advertisements in this column are run at the rate of \$15.00 per insertion, for an advertisement of 50 words or less. An additional charge of 25¢ per word will be assessed for advertisements exceeding the 50-word limit. Copy must be received by the fifth of the month preceding the date of publication. Each advertisement will be removed following its first appearance unless otherwise instructed. If desired, advertisers may utilize a box number in care of THE NEBRASKA MEDICAL JOURNAL, 1512 First Tier Bank Bldg., Lincoln, NE 68508.

EMERGENCY MEDICINE: In Omaha NE — Full and Part-time positions available in an emergency department for qualified physician seeking lucrative employment opportunities. Outstanding remuneration and comprehensive malpractice insurance provided. For further information contact: Deborah Bergun, Staffing Specialist, National Emergency Services, Inc., 255 Executive Dr., Suite 104, Plainview, NY 11803 or call 1-800-645-4848 or 516-349-0100.

FAMILY PRACTICE PHYSICIAN NEEDED: Established need for a family practice physician to join seven man group in beautiful Northwest Iowa. Modern 10,000 sq. ft. clinic building is next door to 72-bed JCAH accredited county hospital. Unusually progressive community of 10,000 has economy far above the state average. Storm Lake offers 3,000 acre lake, 85 acres of park and recreation, and is home to Buena Vista College. One hour from Sioux City, and two hours from Omaha & Des Moines. Generous guarantee with immediate incentive plan, paid malpractice insurance, liberal vacation and seminar time, limited call requirements with seven other physicians and no HMO's in the area. Contact Darrell Pritchard, Manager, Buena Vista Clinic, P.C., 620 Northwestern Drive, Storm Lake, IA 50588. Call collect 712-732-5030.

UROLOGIST: VA Medical Center, Lincoln, Nebraska. Seeking board certified or board eligible urologist for progressive, affiliated 180-bed Medical Center. Center is affiliated with University of Nebraska for urology residency program. Salary and bonus pay commensurate with training and experience. Licensure any state. Must meet English proficiency requirement. Allowable moving expenses payable. Equal Opportunity Employer. Write or call: 402-489-3802, Ext. 229, Chief, Surgical Service, VA Medical Center, 600 South 70th St., Lincoln, NE 68510.

MINNEAPOLIS: Seeks BC/BE associates in adult psychiatry, cardiology, family practice, internal medicine, and obstetrics and gynecology. Practice quality medicine in a prepaid multispecialty setting located in one of America's leading metropolitan areas. Comprehensive benefits, excellent facilities, flexible compensation programs. For further information about joining the GROUP HEALTH medical staff, call Jerry Hess at 612-623-8444 or write to Group Health, Inc., Attention: Jerry Hess, 2829 University Avenue S.E., Minneapolis, MN 55414.

FAMILY PRACTICE AND INTERNAL MEDICINE: Huron Clinic Foundation, Limited is a multispecialty group serving a trade area of approximately 50,000, has a practice situation where several members of the staff are near retirement and a ready practice would be available. A new member can start with NO CASH investment, first year salary guarantee, and receive a large number of benefits including malpractice insurance and a pension plan. The Clinic is located next to a 120 bed JCAH accredited regional hospital with excellent diagnostic and care capabilities. The Clinic is currently pressed for a Board Certified/Board Eligible physician to take over a practice. Call collect (605) 352-8691 or contact any staff member or the clinic manager at the Huron Clinic, P.O. Box 822, Huron, South Dakota 57350.

PRACTICE OPPORTUNITY: Family physician needed to staff urgent care center in urban Nebraska community, 40 to 50 hours per week, no call, no OB, send CV to Box 029, **Nebraska Medical Journal**, 1512 First Tier Bank Bldg., Lincoln, NE 68508.

OPPORTUNITY: SEEKING ABFP-CERTIFIED FAMILY PHYSICIAN: Position available immediately to replace retiring third partner in pleasant family practice clinic. Full range of family practice. Clinic next to 40-bed acute care hospital. Rotating call schedule with time for education and vacations. ACS-certified general surgeons in town. Supportive 2200 population community. Rural farm/ranch area. Hunting, fishing and good flying weather. Salary first year with opportunity to buy in if mutually agreeable. M. K. Stockwell, M.D., Gordon Clinic, P.C., 807 N. Ash, Gordon, Nebraska 69343, Office: (308) 282-1442, Home: (308) 282-2292.



Drug/Alcohol/Emotional/Other Health Problems

HELP IS AVAILABLE
FOR YOU

FOR A MEMBER OF YOUR FAMILY
FOR A PROFESSIONAL, FRIEND OR
COLLEAGUE

Call
The Physician's Advocacy Committee
(Nebraska Medical Association)
Strictly Confidential — Professional — Effective

For information call:

402-393-3216

(You do not have to give your name.)



See the difference in the first week¹

- Sleep improvement in 74% of patients after first h.s. dose²
- Significantly faster relief—62% of total four-week improvement evident in first week versus 44% with amitriptyline alone¹
- Dramatic first-week reduction in somatic complaints²

% Reduction in Somatic Symptoms²

Vomiting	Nausea	Headache	Anorexia	Constipation
Reduced 90%	Reduced 86%	Reduced 72%	Reduced 62%	Reduced 60%

- Only 1/3 the dropout rate due to side effects of amitriptyline alone, although the incidence of side effects is similar¹

Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

Copyright © 1987 by Roche Products Inc. All rights reserved.



Protect your decision.
Write "Do not substitute."

In moderate depression
and anxiety

Limbitrol[®]

Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) 

Limbitrol[®] DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) 

References: 1. Feighner JP, et al. *Psychopharmacology* 61:217-225, Mar 22, 1979. 2. Data on file, Hoffmann-La Roche Inc., Nutley, NJ.

Limbitrol[®] Tranquilizer—Antidepressant

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of moderate to severe depression associated with moderate to severe anxiety.
Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants. Do not use with monoamine oxidase (MAO) inhibitors or within 14 days following discontinuation of MAO inhibitors since hyperpyretic crises, severe convulsions and deaths have occurred with concomitant use; then initiate cautiously, gradually increasing dosage until optimal response is achieved. Contraindicated during acute recovery phase following myocardial infarction.

Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving).

Use in Pregnancy: Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage, withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline, symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).

Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady state concentrations of the tricyclic drugs. Concomitant use of Limbitrol with other psychotropic drugs has not been evaluated, sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.

Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring

reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.

The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs: **Cardiovascular:** Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.

Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.

Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.

Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.

Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.

Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.

Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, block tongue.

Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion.

Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. IV administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single h.s. dose may suffice for some patients. Lower dosages are recommended for the elderly. **Limbitrol DS (double strength) Tablets:** initial dosage of three or four tablets daily in divided doses, increased up to six tablets or decreased to two tablets daily as required. **Limbitrol Tablets:** initial dosage of three or four tablets daily in divided doses, for patients who do not tolerate higher doses.

How Supplied: **Double strength (DS) Tablets:** white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and **Tablets:** blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt). Available in bottles of 100 and 500, Tel-E-Dose[®] packages of 100, Prescription Paks of 50.



ROCHE PRODUCTS INC.
Nutley, Puerto Rico 00701

The rewards of Limbitrol You're both smiling again!

See the difference in the first week¹

In depressed and anxious patients, you can see the difference sooner—62% of total four-week improvement achieved in the first week with Limbitrol versus 44% with amitriptyline.¹

In moderate depression and anxiety

Limbitrol[®]

Each tablet contains 5 mg clordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) ^{IV}

Limbitrol[®] DS

Each tablet contains 10 mg clordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) ^{IV}

ROCHE

Please see summary of product information on adjacent page.

THE NEBRASKA MEDICAL JOURNAL



119
Years



Contents

Original Articles

- Electroconvulsive Therapy: A Survey
of Use in Nebraska **275**
Michael J. Sedlacek, M.D.
Jasbir S. Kang, M.D.

- Coagulase-Negative Staphylococcal
Bacteremia in Neonates **277**
Kara A. Trimble, B.S.
Richard B. Clark, Ph.D.

- Case Report: Cough Induced Avulsion
of the Lesser Trochanter **280**
Jake R. Gradwohl, B.A.
James A. Mailliard, M.D., F.A.C.P.

- Bumming it over Christmas **282**
Kenneth P. Gross
Tom Fitzpatrick

X-Ray of the Month

- Teratoma **284**
James J. Phalen

Perinatal Page

- Alternative Birth Centers: A Four Year
Experience at the University of
Nebraska Medical Center **286**
Katherine Hoffman, R.N., M.S.N.
Margaret Lorkovic, R.N.
William Rayburn, M.D.
Robert Goodlin, M.D.

Letter to the Editor

- "Erroneous Elevation of Creatinine
Caused by 5-fluorocytosine" **289**
Zbigniew Wszolek, M.D.
Howard Monsour, M.D.
Philip Smith, M.D.

Features

- President's Page **290**
The Auxiliary **291**
Medical School News **293**
News from The Robert Wood
Johnson Foundation **294**
Welcome New Members **296**
296
297

Now Available

The Health Policy Agenda for the American People

A Comprehensive Framework for the Future

After five years of collaborative effort, The Health Policy Agenda for the American People (HPA) has issued its Summary and Final Reports recommending policy guidelines for the future of our health care system. This landmark effort establishes a comprehensive, long-term framework for U.S. health policy into the 21st century.

Broad Reaching Recommendations

The HPA Reports contain guiding principles and specific policy recommendations covering a wide subject area:

- supplying, distributing and educating health professionals
- providing technology and facilities
- organizing resources
- communicating health information
- ensuring quality
- paying for services
- preparing for the future through research

A Health Policy Partnership

Representatives of the health professions, insurers, health care institutions, consumer organizations, business groups and the government collaborated to develop recommendations that reflect this broad array of viewpoints. Learn what the HPA has recommended on your behalf...and how it will affect your future.

Order Now

To order your copies of the HPA Summary and Final Reports **call toll-free 1-800-621-8335. In Illinois call collect 312/645-4987.** Or complete and mail the form below with your payment to:
The Health Policy Agenda for the American People
P.O. Box 10946
Chicago, Illinois 60610-0946
Order No. OP-207

Order Form

Please send me _____ copies of the HPA Summary and Final Reports (OP-207) at \$35 for the two volume set.

Subtotal _____
Sales tax (IL, NY residents) _____
Total _____

Name _____

Address _____

City _____

State _____ Zip _____

Please charge my: ☐ VISA ☐ MASTERCARD

Credit Card Number _____

Expiration Date _____

Signature _____

Phone _____

Payment must accompany order. Please allow 4-6 weeks for delivery. For information on bulk purchases, please call 312/280-7168.

Motrin[®] 800 TABLETS mg

ibuprofen



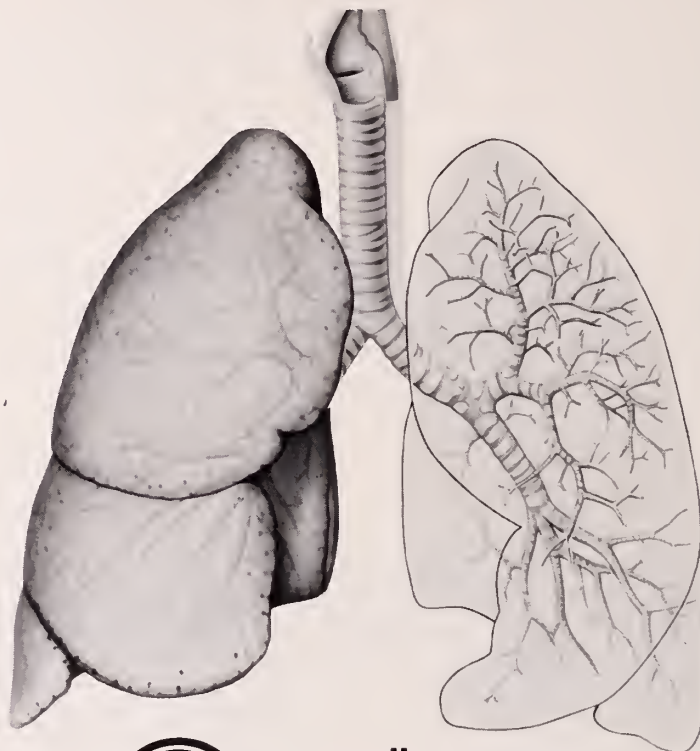
Extra strength
Convenience
Economy

Upjohn



A Century
of Caring
1886-1986

Consider the causative organisms...



Ceclor[®]
cefactor

250-mg Pulvules[®] t.i.d.

**offers effectiveness against
the major causes of bacterial bronchitis**

Haemophilus influenzae, Streptococcus pneumoniae
(ampicillin-susceptible and ampicillin-resistant)

Note: Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

Ceclor[®] (cefactor)

Summary. Consult the package literature for prescribing information.

Indications: Lower respiratory infections, including pneumonia, caused by susceptible strains of *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A β -hemolytic streptococci).

Contraindication:
Known allergy to cephalosporins.

Warnings:

CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients. Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:

- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:

- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] or the above skin manifestations accompanied by arthritis/arthritis and, frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness,

insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.

- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology

- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinistest[®] tablets but not with Tes-Tape[®] (glucose enzymatic test strip, Lilly).

[072886R]
PA 8794 AMP

©1987, ELI LILLY AND COMPANY



700241

Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285.
Eli Lilly Industries, Inc.
Carolina, Puerto Rico 00630

The Nebraska Medical Journal

VOL. 72, NO. 8

AUGUST 1987

EDITOR —

ALAN D. FORKER, M.D.
5505 Ellendale Road,
Lincoln, NE 68510

Associate Editors:

Deepak M. Gangahar, M.D., Lincoln
Charles S. Wilson, M.D., Lincoln

Editorial Board:

James O. Armitage, M.D., Omaha
Rodney S.W. Basler, M.D., Lincoln
Jehangir B. Bastani, M.D., Lincoln
John H. Casey, M.D., Lincoln
Paul E. Collicott, M.D., Lincoln
John F. Connolly, M.D., Omaha
Douglass Decker, Jr., M.D., Lincoln
Robert W. Gillespie, M.D., Lincoln
Stephen R. Grenier, M.D., Lincoln
Bruce D. Gutnik, M.D., Omaha
Roger Harned, M.D., Omaha
Edward A. Holyoke, Jr., M.D., Ogallala
Sushil S. Lacy, M.D., Lincoln
Hal K. Mardis, M.D., Omaha
Gilles R. G. Monif, M.D., Omaha
Walter J. O'Donohue, M.D., Omaha
William F. Rayburn, M.D., Omaha
John L. Reed, M.D., Lincoln
Jerald R. Schenken, M.D., Omaha
Kenton L. Shaffer, M.D., Kearney
Harlan C. Shriner, Jr., M.D., Lincoln
Patricia Cole Stivins, M.D., Lincoln
Harold W. Thaut, M.D., Beatrice
Jon S. Thompson, M.D., Omaha
William L. Vosik, M.D., Kearney
Arthur Weaver, M.D., Lincoln



SUBSCRIPTION RATE

\$18.00 Per Year U.S.
\$18.00 Per Year Foreign Country
Single Copies \$1.50 Each

Copyright © 1987 Nebraska Medical Association. Information concerning reprints of the articles in this Journal and concerning obtaining permission for the reproduction of any portion of this Journal may be obtained from the Editor.

The Nebraska Medical Journal does not assume responsibility for statements made or opinions expressed by the authors. Products and services advertised are neither endorsed nor warranted by the Nebraska Medical Association. The Nebraska Medical Journal reserves the right to accept or reject advertising copy.

Published monthly and Second-Class Postage paid at Lincoln, Nebraska and at additional mailing offices (ISSN 0091-6730)

Address all correspondence relating to subscriptions, advertising or address changes to William L. Schellpeper, Business Manager, 1512 First Tier Bank Building, Lincoln, Nebraska 68508. Phone (402) 474-4472.

ORIGINAL ARTICLES —

- Electroconvulsive Therapy: A Survey of Use in Nebraska.....275**
Michael J. Sedlacek, M.D.
Jasbir S. Kang, M.D.
- Coagulase-Negative Staphylococcal Bacteremia in Neonates.....277**
Kara A. Trimble, B.S.
Richard B. Clark, Ph.D.
- Case Report: Cough Induced Avulsion of the Lesser Trochanter.....280**
Jake R. Gradwohl, B.A.
James A. Mailliard, M.D., F.A.C.P.
- Bumming it over Christmas 282**
Kenneth P. Gross
Tom Fitzpatrick

X-RAY OF THE MONTH —

- Teratoma.....284**
James J. Phalen

PERINATAL PAGE —

- Alternative Birth Centers: A Four Year Experience at the University of Nebraska Medical Center 286**
Katherine Hoffman, R.N., M.S.N.
Margaret Lorkovic, R.N.
William Rayburn, M.D.
Robert Goodlin, M.D.

LETTER TO THE EDITOR —

- "Erroneous Elevation of Creatinine Caused by 5-fluorocytosine".....289**
Zbigniew Wszolek, M.D.
Howard Monsour, M.D.
Philip Smith, M.D.

FEATURES —

- President's Page 290**
The Auxiliary 291
Medical School News 293
News from The Robert Wood Johnson Foundation.....294
Welcome New Members.....296
In Memoriam.....296
Coming Meetings.....297

REPRINTS

OF YOUR

Technical Articles

Are a direct presentation of research
and a valuable supplement
to any doctor's library.



It costs very little
to run reprints —
write us for prices

Norfolk Printing Co., Inc.

118 North Fifth
NORFOLK, NEBRASKA 68701

Letterheads - Statements
Envelopes - Office Forms
Quality Printing at the Right Price

Since 1925

Nebraska's
Leading
Physicians and
Surgical
Supply House

Phone 474-3222



**DONLEY MEDICAL
SUPPLY COMPANY**

P.O. Box 83108, Lincoln, NE 68501
AUTHORIZED CONTRACT AGENT

ADVICE TO AUTHORS

Manuscripts should be submitted in duplicate to the Editor at the following address: Alan D. Forker, M.D., 5505 Ellendale Road, Lincoln, Nebraska 68510. The manuscript should be typewritten, double-spaced, on 8½ x 11 in. paper, with generous margins on each page. Number all pages in the right upper corner with the author's surname.

Review articles will be considered, and should generally be limited to less than 4,000 words and approximately 30 references.

Manuscripts describing original clinical or laboratory research should be limited to 2,000 words and approximately 20 references.

Acknowledgements must be given when material from other publications is included. Provide names of authors, title of article, title of journal or book, volume number, pages, month and year, and publisher's permission to reprint.

Always send a covering letter or letter of transmittal with each manuscript, and refer to the manuscript by its title, in the letter and all correspondence. Do not send a manuscript that was published elsewhere.

Title page: each manuscript should have a title page, including the full name, academic degree, and hospital or university affiliation of each author. A name and address for reprint requests should be included on the title page, including street address, city, state, and zip code.

Summary for article: all major scientific articles should be accompanied by a summary at the end of the article, summarizing the key information and recommendations presented.

References: should be listed in the order in which they appear in the article and should be typed double-spaced. Authors are responsible for the completeness and accuracy of all cited references. Journal references should include authors' names and initials, title of article, abbreviated name of Journal (as listed in Index Medicus), volume number, inclusive pages, and year of publication. References to books should include authors, title, location and name of publisher, year of publication, edition, and page numbers.

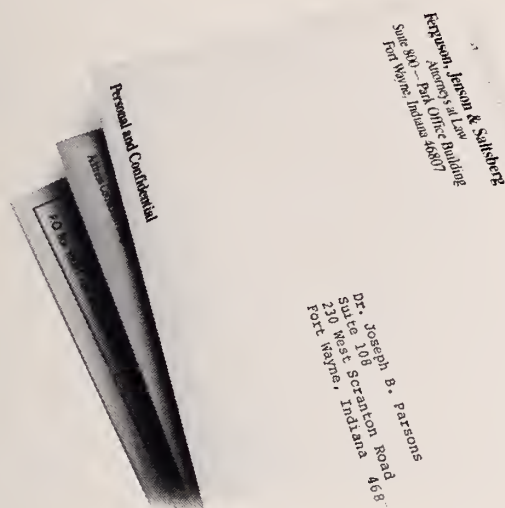
Tables and illustrations: should be typed double-spaced on separate sheets of 8½ x 11 in. paper. Each Table should have a title. Illustrations should be prepared professionally and submitted as high-quality, glossy, unmounted black-and-white photographic prints, at least 5 x 7 in. Do not send original artwork. Each illustration should be consecutively numbered and cited in the text. Each photograph should have a gummed label on the back containing the figure number, name of senior author and an arrow indicating top of figure. Legends should be typed double-space for each illustration. Permission to reproduce a picture of a patient is needed, if such a picture is included.

Letters-to-the-Editor: letters are encouraged by all readers and will be published as space permits and at the discretion of the Editor. All letters should be accompanied by the notation: For publication. Galley proofs generally will not be returned to the authors pre-publication.

Manuscripts will be published in the order in which they are received, particularly in the order in which galley proofs are returned from the authors. The Editor of this Journal assumes no responsibility for opinions and claims expressed in an article published in this Journal.

Reprints should be ordered from the printer, Norfolk Printing Company, Inc., P.O. Box 278, Norfolk, Nebraska 68701.

Crisis in black and white.



Your personal crisis may be waiting in the morning mail. If so, you'll want the best professional help. You'll want a Medical Protective General Agent.

Professional liability coverage is our only business. And we've been providing it for almost 100 years. Our agents live in the territories they serve so they understand the local legal climate. And with the extensive resources of the home office Law Department to draw from, they're always ready to answer your questions or give advice.

Someday it may be you against a negligence charge. When that day comes and your professional reputation is on the line, you're going to want all the help you can get. To make sure you have it, contact your Medical Protective General Agent today.

**THE
MEDICAL PROTECTIVE COMPANY**
FORT WAYNE, INDIANA

L. Roger Garner

Suite 114, Corporate Plaza, 11212 Davenport, Omaha, NE 68154, (402) 334-9689

AMA News Notes

AMA AIDS testing policy. The American Medical Association's new policy on AIDS recommends:

Mandatory testing of:

- Donors of blood and blood fractions, organs, tissues, semen and ova.
- Inmates in federal, state prisons.
- Immigrants to the United States.
- Military personnel

Routine voluntary testing with informed consent for the following types of individuals who are from areas with a high incidence of AIDS or who engage in high risk behavior.

- Patients at sexually transmitted disease clinics and drug abuse clinics.
- Pregnant women in their first trimester of pregnancy.
- People seeking family planning services.
- Patients who require surgical or other invasive procedures. (If the voluntary policy is not sufficiently accepted by such patients, the

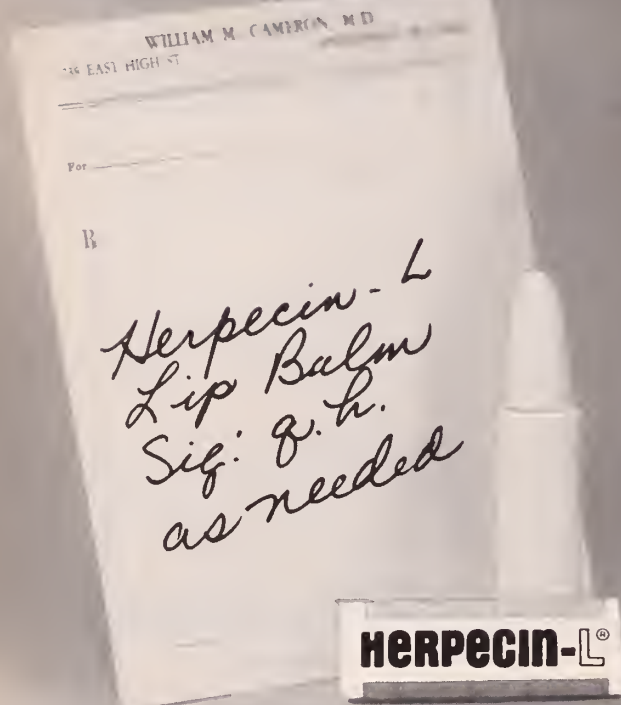
(continued on page 14A)

FAMILY PRACTICE PHYSICIAN

With obstetrical capabilities is needed to practice in the medical clinic adjacent to the hospital. Enjoy excellent guarantee plus incentive with paid malpractice insurance, vacation and CME leave, and group health and life insurance benefits. An active and rewarding practice will develop quickly in the community designated as a primary care physician shortage area located in southeastern South Dakota near Lake Francis Case on the Missouri River. For further information please contact

**WAGNER COMMUNITY
MEMORIAL HOSPITAL**
Third and Wagner Heights
Wagner, SD 57380
(605) 384-3611

Dx: recurrent herpes labialis



"HERPECIN-L is my treatment of choice for perioral herpes." GP, NY

"HERPECIN-L appears to actually prevent the blisters . . . used soon enough." DDS, MN

"HERPECIN-L . . . a conservative approach with low risk/high benefits." MD, FL

"Used at prodromal symptoms . . . blisters never formed . . . remarkable." DH, MA

"(In clinical trials) . . . response was dramatic. HERPECIN-L . . . proven far superior." DDS, PA

"All patients claimed shorter duration . . . at prodromal symptoms . . . HERPECIN-L averted the attacks." MD, AK

OTC. See P.D.R. for information. For samples to make your own clinical evaluation, write: CAMPBELL LABORATORIES, INC., P.O. BOX 812-MD, FDR STATION, NEW YORK, N.Y. 10150

In Nebraska HERPECIN-L is available at all *Keystone, Osco and Walgreens* and other select pharmacies.

COUNCILOR DISTRICTS AND COUNTIES

First District: Councilor: Richard B. Svehla, Omaha. Counties: Douglas, Sarpy.
Second District: Councilor: Sushil S. Lacy, Lincoln. Counties: Cass, Lancaster, Otoe.
Third District: Councilor: C. T. Frerichs, Beatrice. Counties: Gage, Johnson, Nemaha, Pawnee, Richardson.
Fourth District: Councilor: Roger Massie, Plainview. Counties: Antelope, Cedar, Cumming, Dakota, Dixon, Knox, Madison, Pierce, Stanton, Thurston, Wayne.
Fifth District: Councilor: William Chleborad, M.D., Fremont. Counties: Boone, Burt, Colfax, Dodge, Merrick, Nance, Platte, Washington.
Sixth District: Councilor: Robert Herpolsheimer, M.D., Seward. Counties: Butler, Hamilton, Polk, Saunders, Seward, York.
Seventh District: Councilor: Robert Quick, M.D., Crete. Counties: Clay, Fillmore, Jefferson, Nuckolls, Saline, Thayer.
Eighth District: Councilor: Floyd H. Shiftemiller, Ainsworth. Counties: Boyd, Brown, Cherry, Holt, Keya Paha, Rock, Sheridan.
Ninth District: Councilor: Stanley Nabity, Grand Island. Counties: Blaine, Buffalo, Custer, Dawson, Garfield, Grant, Greeley, Hall, Hooker, Howard, Loup, Sherman, Thomas, Valley, Wheeler.
Tenth District: Councilor: David R. Little, M.D., Hastings. Counties: Adams, Chase, Dundy, Franklin, Frontier, Furnas, Gosper, Harlan, Hayes, Hitchcock, Kearney, Phelps, Red Willow, Webster.
Eleventh District: Councilor: Donald E. Fischer, North Platte. Counties: Arthur, Deuel, Garden, Keith, Lincoln, Logan, McPherson, Perkins.
Twelfth District: Councilor: Donald E. Wilkinson, Alliance. Counties: Banner, Box Butte, Cheyenne, Dawes, Kimball, Morrill, Scotts Bluff, Sioux.

NEBRASKA MEDICAL ASSOCIATION Councilor Districts and Component County Medical Societies COMPONENT COUNTY MEDICAL SOCIETIES

COUNTY	PRESIDENT	SECRETARY-TREASURER
Adams	Kevin Wycoff, Hastings	Richard French, Hastings
Antelope-Pierce	Kenneth Peters, Plainview	David Johnson, Osmond
Box Butte	Wendell Fairbanks, Alliance	Chris Wilkinson, Alliance
Buffalo	John Schulte, Kearney	Gerry Jensen, Kearney
Butler	Victor Thoendel, David City	Jack Kaufmann, David City
Cass	R. R. Anderson, Nehawka	Glen K. Knosp, Elmwood
Cheyenne-Kimball-Deuel	James Thayer, Sidney	Clinton Dorwart, Sidney
Cumming		Gordon Moshman, West Point
Custer	Loren Jacobsen, Broken Bow	N. Leon Books, Broken Bow
Dawson		Rodney Sitorius, Cozad
Dodge	Rod Koerber, Fremont	W. B. Eaton, Fremont
Five	Willis L. Wiseman, Wayne	Robert Benthack, Wayne
Four	Tom Martin, Ord	Otis Miller, Ord
Gage	Alan Langvardt, Beatrice	Louis J. Gogela, Jr., Beatrice
Hall	L. W. Hake, Grand Island	Gordon Francis, Grand Island
Hamilton	M. D. Jobman, Aurora	G. D. Penner, Aurora
Holt & Northwest	Melvin Campbell, Ainsworth	John Bryd, Valentine
Jefferson	Gordon O. Johnson, Fairbury	R. A. Blatny, Fairbury
Knox	D. M. Laflan, Creighton	D. J. Nazengast, Bloomfield
Lancaster	C. L. Barton, Lincoln	M. A. Breiner, Lincoln
Lincoln	Dell Shepherd, North Platte	Timothy O'Holleran, North Platte
Madison	G. Tom Surber, Norfolk	C. Robert Adams, Norfolk
Metropolitan Omaha	Gerald R. Schenken, Omaha	F. F. Paustian, Omaha
Northeast	G. Tom Surber, Norfolk	C. Robert Adams, Norfolk
Northwest	Joel Hutchens, Gordon	R. H. Rasmussen, Chadron
Otoe	Dean R. Thomson, Nebraska City	Paul R. Madison, Nebraska City
Keith-Perkins-Chase	Berl W. Spencer, Ogallala	E. A. Holyoke, Ogallala
Platte-Loup Valley	Arthur Liebenritt, Columbus	Dwight Rickard, Columbus
Saline		Robert E. Tuma, Crete
Sarpy	Fred Gawecki, Papillion	Fred Schwartz, Papillion
Saunders	I. M. French, Wahoo	John E. Hansen, Jr., Wahoo
Scotts Bluff	Lowell Stratton, Mitchell	Vonn Roberts, Scottsbluff
Seward	Paul Plessman, Seward	Van Vahle, Seward
South Central	Jeff Hollins, Geneva	Chas. F. Ashby, Geneva
Southeast Nebr.	Gary Ens, Auburn	George Voigtlander, Pawnee City
Southwest Nebr.	David A. Allerheilgen, McCook	E. C. Beyer, McCook
Washington-Burt	H. Neal Sievers, Blair	K. C. Bagby, Blair
York	James D. Bell, York	Darroll J. Loschen, York

To show you how many
hypertensives stayed on

INDERAL[®] LA
(PROPRANOLOL HCl)

after a major nationwide trial...



...we had
to find
just the
right room.



60,073 patients (90%) who started on INDERAL[®] LA stayed on INDERAL LA.^{1*}

Surprising? Not really.

Because most patients on INDERAL LA (propranolol HCl) don't even know it's working.

A recent double-blind, placebo-controlled, crossover study in 138 hypertensive patients² revealed that INDERAL LA has a side effects profile unsurpassed by atenolol or metoprolol — which shows how well-tolerated once-daily INDERAL LA can be.

Sole therapy or concomitant therapy?

Fifty-nine percent of the time, INDERAL LA stood on its own.

The patients in the nationwide compliance trial were no different from yours. Generally when the antihypertensive regimen is complicated, compliance may become a problem. So, the effectiveness of INDERAL LA as once-daily monotherapy is a big plus. Of the remaining hypertensives in the program, 36% were treated merely with the addition of a diuretic to INDERAL LA.

For the noncompliant patients in your practice, INDERAL LA may well be the answer.

Almost 20,000 of the patients in the nationwide compliance trial were identified as having been noncompliant with their previous antihypertensive therapy. Their physicians reported that 88% showed improved compliance when placed on once-daily INDERAL LA.

Control, comfort, and compliance

ONCE-DAILY
INDERAL[®] LA
(PROPRANOLOL HCl) **LONG ACTING CAPSULES**

Like conventional INDERAL Tablets, INDERAL LA should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree, and bronchial asthma.

*After a 30-day trial with INDERAL LA, physicians reported that 90% of the patients would remain on INDERAL LA.

The one you know best keeps looking better

Please see next page for brief summary of prescribing information.

N O W A V A I L A B L E . . .
NEW LOW DOSE
INDERAL[®] LA 60 mg
(PROPRANOLOL HCl) **LONG ACTING CAPSULES**

The one you know best keeps looking better

BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION SEE PACKAGE CIRCULAR)

INDERAL® LA brand of propranolol hydrochloride (Long Acting Capsules)

DESCRIPTION. Inderal LA is formulated to provide a sustained release of propranolol hydrochloride. Inderal LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. Inderal is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by Inderal, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

Inderal LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with Inderal LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of Inderal Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

Inderal LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to Inderal LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, Inderal LA has been therapeutically equivalent to the same mg dose of conventional Inderal as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. Inderal LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. **Hypertension:** Inderal LA is indicated in the management of hypertension. It may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. Inderal LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: Inderal LA is indicated for the long-term management of patients with angina pectoris.

Migraine: Inderal LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: Inderal LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. Inderal LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. Inderal is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first-degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with Inderal.

WARNINGS. **CARDIAC FAILURE.** Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or Inderal should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of Inderal therapy. Therefore, when discontinuance of Inderal is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If Inderal therapy is interrupted and exacerbation of angina occurs, it is advisable to reinstitute Inderal therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema) — PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. Inderal should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY. The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

Inderal (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA. Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS. Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T_4 and reverse T_3 , and decreasing T_3 .

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case, this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. **GENERAL.** Propranolol should be used with caution in patients with impaired hepatic or renal function. Inderal (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should

be told that Inderal may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS. Elevated blood urea levels in patients with severe heart disease; elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS. Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if Inderal is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenytoin, phenobarbital, and rifampin accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

Antipyrine and lidocaine have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T_3 concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY. Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY. Pregnancy Category C. Inderal has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. Inderal should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS. Inderal is excreted in human milk. Caution should be exercised when Inderal (propranolol HCl) is administered to a nursing woman.

PEDIATRIC USE. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular. Bradycardia, congestive heart failure, intensification of AV block, hypotension, paresthesia of hands, thrombocytopenic purpura, arterial insufficiency, usually of the Raynaud type.

Central Nervous System. Light-headedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances, hallucinations, vivid dreams, an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy and vivid dreams appear dose related.

Gastrointestinal. Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic. Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory. Bronchospasm.

Hematologic. Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune. In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous. Alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSE AND ADMINISTRATION. Inderal LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from Inderal Tablets to Inderal LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. Inderal LA should not be considered a simple mg-for-mg substitute for Inderal. Inderal LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION — Dosage must be individualized. The usual initial dosage is 80 mg Inderal LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood-pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS — Dosage must be individualized. Starting with 80 mg Inderal LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE — Dosage must be individualized. The initial oral dose is 80 mg Inderal LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, Inderal LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS — 80-160 mg Inderal LA once daily.

PEDIATRIC DOSAGE — At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

REFERENCES:

1. Inderal LA National Compliance Evaluation Program. Data on file. Ayerst Laboratories.
2. Ravid M, Lang R, Jutrin I. The relative antihypertensive potency of propranolol, oxprenolol, atenolol, and metoprolol given once daily. *Arch Intern Med* 1985; 145:1321-1323.

1R7119 887

Ayerst

AYERST LABORATORIES
New York, NY 10017

© 1987 Ayerst Laboratories

READY FOR AN OFFICE COMPUTER?

AUTO-MED INC. presents **MEDICAL OFFICE SYSTEMS** software ready to run on your IBM-XT, IBM-AT, or Compatible.

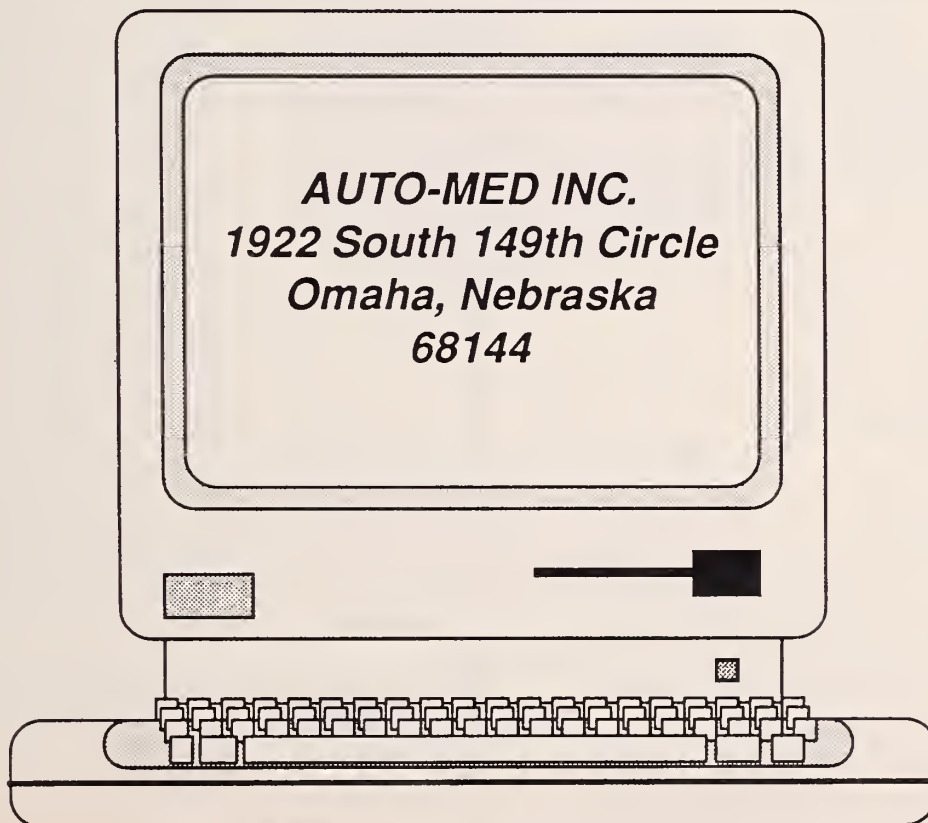
The MEDICAL OFFICE SYSTEM can be leased and supported for a low monthly fee with no "up-front" charges!

The MEDICAL OFFICE SYSTEM was developed by and for PHYSICIANS and includes the following features:

- * records patient demographic data * prints monthly statements * prints insurance forms
- * posts all charges in CPT code * records diagnosis in ICD-9 code * allows 20 fee schedules
- * detailed practice analysis * collection rate & accounts receivable analysis * audit trail
- * print patient face sheets * print charge tickets * print patient recalls
- * record non-patient practice income * medical data search * print day sheets * print mail labels

The MEDICAL OFFICE SYSTEM is available as a Complete System or Software alone - lease or purchase.

For Further information, demonstration disks, or documentation manuals contact:



Creighton University Medical Center
announces the Second Annual

A DAY WITH THE PERINATOLOGISTS

At The Red Lion Inn
Omaha, Nebraska

September 25-26

COURSE DIRECTOR: Washington C. Hill, M.D.
Director, Maternal-Fetal Medicine
and The Perinatal Center

FACULTY:

Richard O. Depp, M.D.
Washington C. Hill, M.D.
Kathleen A. Kuhlman, M.D.
Michael G. Levine, M.D.
Jennifer R. Niebyl, M.D.
William F. Rayburn, M.D.



AMA CATEGORY I
CREDITS AND ACOG
COGNATES AVAILABLE

Registration Fee:
\$195.00

For further information:
Office of Continuing
Education
Creighton University
School of Medicine
Omaha, NE 68178
Call: 1-800-228-7212
ext. 2550

AMA News Notes

(continued from page 7A)

hospital and medical staff should consider implementing a mandatory program.)

As a matter of medical judgment, voluntary testing should be encouraged for:

- Individuals whose history or clinical status warrants this measure.
- Anyone who is homosexual, bisexual or has a history of intravenous drug use or who is the sexual partner of anyone in these groups now before the Congress.

* * *

Starting next January, the AMA's nine specialty journals will be distributed to all physicians within the specialties the publications address.

Attempting to enlarge the circulation of the specialty journals, AMA trustees voted recently to distribute them to physicians, residents in training, and to teachers, researchers, and administrators in the specialty addressed by each journal, regardless of AMA membership status. The journals had been distributed to AMA members without additional charge as a benefit of membership.

In an open letter to the profession, AMA Executive Vice President James H. Sammons, M.D., said the board's action "will increase the value of these publications to their target specialties, and it will also give the Association an opportunity to expand each journal's base of support." Dr. Sammons also noted that the move would assure the publications' financial vitality and would provide an opportunity to enhance their educational value.

The specialty publications are: *American Journal of Disease of Children*, *Archives of General Psychiatry*, *Archives of Internal Medicine*, *Archives of Neurology*, *Archives of Ophthalmology*, *Archives of Otolaryngology-Head & Neck Surgery*, *Archives of Pathology & Laboratory Medicine*, and *Archives of Surgery*.

o o o

Stepping up the war against smoking, the AMA has printed up "obituary" cards for physicians' use in pressing their represen-

(continued on page 300)

THE NAVAL RESERVE NEEDS YOU!

The Naval Reserve is actively seeking Physicians due to the expanded requirements of the military Fleet Hospital Program. All medical specialties are needed, particularly Surgeons and Anesthesiologists.

Alter your Practice routine by serving your country as a Naval Officer.

We offer:

- Flexibility in drill schedule
- 4 days' pay for 2 days' work
- Educational loan repayment program
- Continuing Medical Education (CME)
- The opportunity to travel and do something special
- Contact (913) 764-3664

Before prescribing, see complete prescribing information in SK&F CO. literature or PDR. The following is a brief summary

WARNING

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K⁺ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K⁺ intake. Associated widened QRS complex or arrhythmia requires prompt additional therapy. Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.

Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium; use with caution with 'Dyazide'. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin [ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function. Thiazides may add to or potentiate the action of other antihypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.

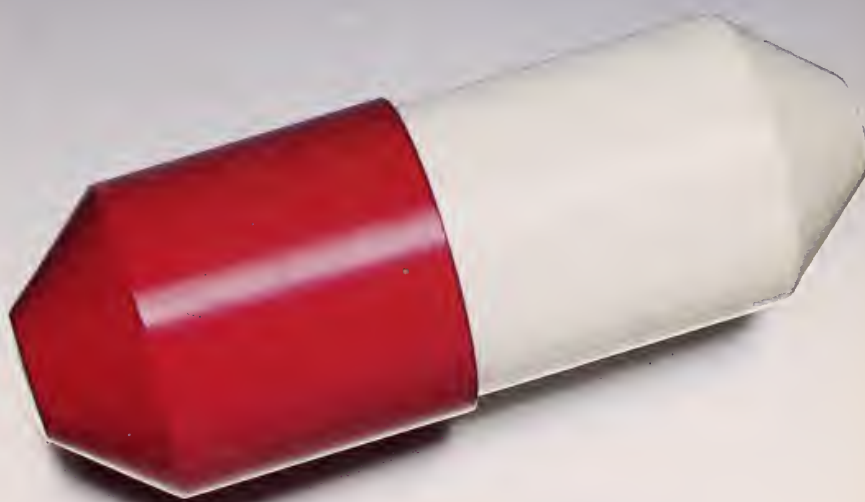
Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak™ unit-of-use bottles of 100.

BRS-DZ:L42

In Hypertension*... When You Need to Conserve K⁺

Remember the Unique Red and White Capsule: Your Assurance of SK&F Quality

Serum K⁺ and BUN should be checked periodically (see Warnings and Precautions).



Potassium-Sparing

DYAZIDE®

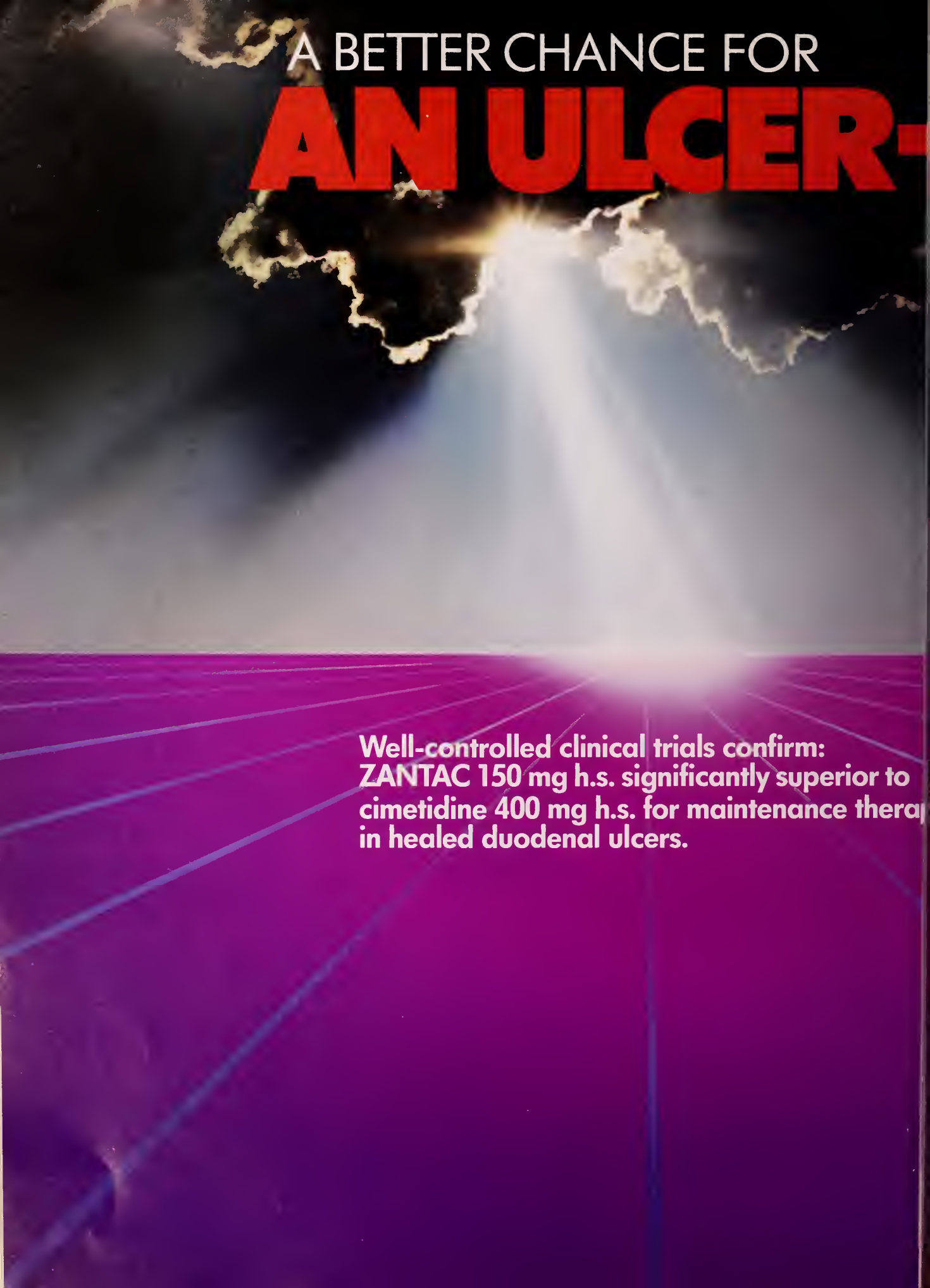
25 mg Hydrochlorothiazide/50 mg Triamterene/SKF

Over 20 Years of Confidence

a product of
SK&F CO.
Carolina, P.R. 00630

The unique
red and white
Dyazide® capsule:
Your assurance of
SK&F quality





A BETTER CHANCE FOR **AN ULCER-**

Well-controlled clinical trials confirm:
**ZANTAC 150 mg h.s. significantly superior to
cimetidine 400 mg h.s. for maintenance therapy
in healed duodenal ulcers.**

FREE FUTURE

Percent of patients ulcer-free after 1 year of therapy

ZANTAC

150 mg h.s. (n = 60)

84%*

cimetidine

400 mg h.s. (n = 66)

57%

ZANTAC

150 mg h.s. (n = 243)

77%†

cimetidine

400 mg h.s. (n = 241)

63%

*P = 0.01 †P = 0.0004 % life-table estimates

All patients were permitted prn antacids for relief of pain. Adopted from Silvis¹ and Gough²

These two trials^{1,2} used the currently recommended dosing regimen of cimetidine (400 mg h.s.) and ranitidine (150 mg h.s.). A comparison of other dosing regimens has not been studied.

The studied dosing regimens are not equivalent with respect to the degree and duration of acid suppression or suppression of nocturnal acid.

The superiority of ranitidine over cimetidine in these trials indicates that the dosing regimen currently recommended for cimetidine is less likely to be as successful in maintenance therapy.

Zantac[®] 150 h.s.
ranitidine HCl/Glaxo 150 mg tablets

Glaxo / **ROCHE**

See next page for references and Brief Summary of Product Information.

ZAN375 July 1987

References: 1. Silvis SE, Griffin J, Hardin R, et al: Final report on the United States multicenter trial comparing ranitidine to cimetidine as maintenance therapy following healing of duodenal ulcer. *J Clin Gastroenterol* 1985;7(6):482-487.
2. Gough KR, Korman MG, Bordhon KD, et al: Ranitidine and cimetidine in prevention of duodenal ulcer relapse: A double-blind, randomised, multicentre, comparative trial. *Lancet* 1984;ii:659-662.

ZANTAC® 150 Tablets
(ranitidine hydrochloride)
ZANTAC® 300 Tablets
(ranitidine hydrochloride)

**BRIEF SUMMARY OF
PRODUCT INFORMATION**

The following is a brief summary only. Before prescribing, see complete prescribing information in ZANTAC® product labeling.

INDICATIONS AND USAGE: ZANTAC® is indicated in:

1. Short-term treatment of **active duodenal ulcer**. Most patients heal within four weeks.
2. **Maintenance therapy** for duodenal ulcer patients at reduced dosage after healing of acute ulcers.
3. The treatment of **pathological hypersecretory conditions** (eg, Zollinger-Ellison syndrome and systemic mastocytosis).
4. Short-term treatment of **active, benign gastric ulcer**. Most patients heal within six weeks and the usefulness of further treatment has not been demonstrated.
5. Treatment of **gastroesophageal reflux disease (GERD)**. Symptomatic relief commonly occurs within one or two weeks after starting therapy and is maintained throughout a six-week course of therapy.

In active duodenal ulcer, active, benign gastric ulcer, hypersecretory states, and GERD, concomitant antacids should be given as needed for relief of pain.

CONTRAINDICATIONS: ZANTAC® is contraindicated for patients known to have hypersensitivity to the drug.

PRECAUTIONS: Symptomatic response to ZANTAC® therapy does not preclude the presence of gastric malignancy.

Since ZANTAC is excreted primarily by the kidney, dosage should be adjusted in patients with impaired renal function (see **DOSAGE AND ADMINISTRATION**). Caution should be observed in patients with hepatic dysfunction since ZANTAC is metabolized in the liver.

False-positive tests for urine protein with Multistix® may occur during ZANTAC therapy, and therefore testing with sulfosalicylic acid is recommended.

Although recommended doses of ZANTAC do not inhibit the action of cytochrome P-450 enzymes in the liver, there have been isolated reports of drug interactions which suggest that ZANTAC may affect the bioavailability of certain drugs by some mechanism as yet unidentified (eg, a pH-dependent effect on absorption or a change in volume of distribution).

Lack of experience to date precludes recommending ZANTAC for use in children or pregnant patients. Since ZANTAC is secreted in human milk, caution should be exercised when administered to a nursing mother.

ADVERSE REACTIONS: Headache, sometimes severe, seems to be related to ZANTAC® administration. Constipation, diarrhea, nausea/vomiting, and abdominal discomfort/pain have been reported. There have been rare reports of malaise, dizziness, somnolence, insomnia, vertigo, tachycardia, bradycardia, premature ventricular beats, and arthralgias. Rare cases of reversible mental confusion, agitation, depression, and hallucinations have been reported, predominantly in severely ill elderly patients.

In normal volunteers, SGPT values were increased to at least twice the pretreatment levels in 6 of 12 subjects receiving 100 mg qid IV for seven days, and in 4 of 24 subjects receiving 50 mg qid for five days. With oral administration there have been occasional reports of reversible hepatitis, hepatocellular or hepatocanalicular or mixed, with or without jaundice.

There have been rare reports of reversible leukopenia, granulocytopenia, thrombocytopenia, and pancytopenia.

Although controlled studies have shown no antiandrogenic activity, occasional cases of gynecomastia, impotence, and loss of libido have been reported in male patients receiving ZANTAC, but the incidence did not differ from that in the general population.

Incidents of rash, including rare cases suggestive of mild erythema multiforme, and, rarely, alopecia, have been reported, as well as rare cases of hypersensitivity reactions (eg, bronchospasm, fever, rash, eosinophilia) and small increases in serum creatinine.

OVERDOSAGE: Information concerning possible overdosage and its treatment appears in the full prescribing information.

DOSAGE AND ADMINISTRATION: Active Duodenal Ulcer: The current recommended adult oral dosage is 150 mg twice daily. An alternate dosage of 300 mg once daily at bedtime can be used for patients in whom dosing convenience is important. The advantages of one treatment regimen compared to the other in a particular patient population have yet to be demonstrated.

Maintenance Therapy: The current recommended adult oral dosage is 150 mg at bedtime.

Pathological Hypersecretory Conditions (such as Zollinger-Ellison Syndrome): The current recommended adult oral dosage is 150 mg twice a day. In some patients it may be necessary to administer ZANTAC 150-mg doses more frequently. Doses should be adjusted to individual patient needs, and should continue as long as clinically indicated. Doses up to 6 g/day have been employed in patients with severe disease.

Benign Gastric Ulcer: The current recommended adult oral dosage is 150 mg twice a day.

GERD: The current recommended adult oral dosage is 150 mg twice a day.

Dosage Adjustment for Patients with Impaired Renal Function: On the basis of experience with a group of subjects with severely impaired renal function treated with ZANTAC, the recommended dosage in patients with a creatinine clearance less than 50 ml/min is 150 mg every 24 hours. Should the patient's condition require, the frequency of dosing may be increased to every 12 hours or even further with caution. Hemodialysis reduces the level of circulating ranitidine. Ideally, the dosage schedule should be adjusted so that the timing of a scheduled dose coincides with the end of hemodialysis.

HOW SUPPLIED: ZANTAC® 300 Tablets (ranitidine hydrochloride equivalent to 300 mg of ranitidine) are yellow, capsule-shaped tablets embossed with "ZANTAC 300" on one side and "Glaxo" on the other. They are available in bottles of 30 (NDC 0173-0393-40) and unit dose packs of 100 tablets (NDC 0173-0393-47).

ZANTAC® 150 Tablets (ranitidine hydrochloride equivalent to 150 mg of ranitidine) are white tablets embossed with "ZANTAC 150" on one side and "Glaxo" on the other. They are available in bottles of 60 tablets (NDC 0173-0344-42) and unit dose packs of 100 tablets (NDC 0173-0344-47).

Store between 15° and 30° C (59° and 86° F) in a dry place. Protect from light. Replace cap securely after each opening.

© Copyright 1983, Glaxo Inc. All rights reserved.

October 1986

Glaxo

Glaxo Inc.
Research Triangle Park, NC 27709

Give five.

What you get back
is immeasurable.

Just five hours a week. Just 5% of your income. It's not much to give, to the causes you really care about. But that small investment could change somebody's life. And it's hard to imagine a better return than that.

Ad Council
INDEPENDENT
SECTOR

THE NEBRASKA MEDICAL JOURNAL

Electroconvulsive Therapy: A Survey of Use in Nebraska

THIS survey is an attempt to determine the Nebraska psychiatric community's standard of care regarding the use of electroconvulsive therapy (ECT). Special attention was given to the treatment site, the person administering the anesthesia, initial electrode placement and the use of multiple monitored ECT (MMECT), as compared to the guidelines established by the American Psychiatric Association.

Method

In February 1987, a questionnaire was mailed to the 101 members of the Nebraska Psychiatric Society. The 15 questions surveyed demographics, frequency of ECT use, pre-ECT workup, site of treatment and techniques used. The questionnaires were returned over a two month period.

Results

We received 65 of 101 (64%) surveys mailed. Four of the respondents were retired and hence dropped from the survey. Of the remaining 61, 55 (90%) were males. A majority of the respondents were over 50 years old. The vast majority had been in practice longer than ten years. Thirty (49%) reported using ECT. Eighteen (60%) employ ECT on 0-5 patients per year; 4 (13%) use on 6-10; 3 (10%) use on 10-15; and 5 (17%) on more than 15.

Differences among the ECT user and non-user groups in regard to age, sex, and number of years in practice were assessed using chi square. No significant differences were obtained between the two groups at the 0.05 significance level.

Pre-ECT Medical Evaluation

Of those respondents using ECT, 25-30 (83%-100%) required physical examination, CBC, EKG, chemistry profile and chest x-ray; 17-23 (56%-76%) required electrolytes, VDRL and spinal x-rays; 14 (46%) required EEG; and 8 (26%) report using pseudocholinesterase levels in their assessments; CT examinations

MICHAEL J. SEDLACEK, M.D.*

JASBIR S. KANG, M.D.

Department of Psychiatry, University of Nebraska
Medical Center

of the head were obtained routinely by 6 (20%). Other evaluation procedures mentioned were internal medicine consults, thyroid profile, urinalysis, Dexamethasone Suppression Test, and the Luria-Nebraska Neuropsychiatric battery.

Site of ECT Administration

Twenty-one (70%) of the psychiatrists administer ECT in a psychiatric hospital. Nine (30%) use a surgical suite or recovery room. One respondent routinely uses the patient's room.

Medications

Methohexital (Brevital) was the anesthetic of choice of 26 (87%) of respondents. Atropine was chosen by 12 (40%) as a routine anticholinergic agent; 11 (37%) use glycopyrrolate (Robinul). One respondent reported using intravenous caffeine to prolong seizure time. Succinylcholine (Anectine) is routinely used to achieve muscle paralysis.

Anesthesiologists are utilized by 17 (57%) of psychiatrists; 10 (33%) use nurse anesthetists. Three (10%) administer the anesthetic themselves.

Electrode Placement

Bilateral electrode placement was preferred overwhelmingly. Twenty-one (70%) used bilateral treatments exclusively with only 3 (10%) using unilateral treatment exclusively. The remaining 6 (20%) varied the electrode placement depending on clinical conditions.

*Address correspondence and reprint requests to: Michael J. Sedlacek, M.D., Department of Psychiatry, University of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, Nebraska 68105-1065.

Treatment Interval

Twenty-six (87%) report using single-treatment alternate-day ECT three times a week. Only 6 (20%) report the use of multiple monitored ECT as a routine practice. Others reported variable intervals depending on the patient's status.

Number of Treatments

Twenty-four (80%) administer between 6 and 12 ECT treatments in a series; 4 (13%) administer 0-6; one reports 12-18; and two administer more than 18, but only for paranoid schizophrenia.

Maintenance ECT

Eighteen (60%) of users report at least periodic use of maintenance ECT. They report an average use of maintenance ECT with two patients per year. Nine (50%) of those use a 2-4 week treatment interval and 5 (28%) use a 4-6 week interval. Others report a variable interval schedule.

Discussion

Of the 65 survey respondents, nearly 50% report using ECT with the majority of these using it 0-5 times per year. There was no statistical differences in regards to age, sex and number of years in practice among the ECT user and non-user groups.

The pre-treatment evaluations reported were consistent with The American Psychiatric Associations (APA) Task Force report on ECT.¹ They recommend laboratory testing as dictated by the principles of good medical practice. Routine pseudocholinesterase levels were obtained by 26% of respondents. This is especially important in the very old patients with a personal or a family history of abnormal response to succinylcholine or patients taking anticholinesterase medications for myasthenia gravis or glaucoma. The Task Force report also recommends spinal x-rays based on history and physical examination findings.

The medications used, site of ECT and person administering ECT were also consistent with APA recommendations. They recommend that ECT be administered only in a location where immediate access to emergency care is available to manage potential complications. The use of adequate anesthesia and continuous intravenous access is essential, with the use of atropine or glycopyrrolate at the physicians discretion to prevent brady-

cardia or asystole during the seizure. The National Institute of Mental Health's Consensus Development Conference on ECT² recommends that only health professionals specifically trained and certified in the use of brief anesthetic procedures administer anesthesia. In our survey, 3 (10%) of the psychiatrists report administering their own anesthesia. This compares with a 1982 survey of the National Association of Private Psychiatric Hospitals (NAPPH)³ which indicated that 40% of the psychiatrists were administering the anesthesia. This reflects the presumed safety of this procedure.

Unilateral electrode placement was used initially by only 3 (10%) of respondents despite the APA Task Force's recommendation of it's use, which is based on research that indicates memory disturbance is considerably less than with bilateral placement. However, further research comparing the efficacy of these two methods is needed. This survey finding is in contrast to a Danish survey⁴ which reported unilateral placement as the most common choice.

A treatment interval of alternate-day ECT as practiced by 87% of respondents is the generally accepted practice, as noted in the APA report.¹ The use of multiple monitored ECT (MMECT: multiple seizures per ECT session) was reported by 20% of psychiatrists. This compares to a 1975 New York hospital survey⁵ in which it was used only in life-threatening situations. Although it's use has become more common, the APA Task Force recommends further study.

The use of maintenance ECT at weekly to monthly intervals was reported by 60% of the ECT users. This compares with the study by Levy et al³ in which 47% of respondents report its use. Again, the APA Task Force has called for further study and clinical documentation regarding its effectiveness.

Conclusion

Although this survey is rather limited in its scope with a 64% response rate, it indicates that the majority of Nebraska practitioners are following the APA Task Force recommendations. One exception is the heavy preference for bilateral electrode placement. Electroconvulsive therapy remains a commonly used effective modality for the treatment of depres-

sion. There is still much research needed regarding electrode placement, MMECT and maintenance ECT.

References

1. American Psychiatric Association Task Force on ECT. Task Force Report 14. Washington, DC. American Psychiatric Association, 1978.
2. National Institute of Mental Health, Consensus

Development Conference Statement on Electroconvulsive Therapy, Vol. 5, Number 11, June 1985.

3. Levy S, Albrecht E: Electroconvulsive Therapy - A Survey of Use in the Private Psychiatric Hospital. *J Clin Psychiatry*, 46(4):125-127, April 1985.

4. Heshe J, Roeder E: Electroconvulsive Therapy in Denmark. *Br J Psychiatry*, 128:241-245, 1976.

5. Asnis GM, Fink M, Saferstein S: ECT in Metropolitan New York Hospitals: A Survey of Practice, 1975-1976. *Am J Psychiatry*, 135:479-482, 1978.

Coagulase-Negative Staphylococcal Bacteremia in Neonates

COAGULASE-NEGATIVE staphylococci, once known collectively as *S. epidermidis*, normally reside on human skin and mucous membranes as harmless commensals. These organisms continue to be among the most common of the contaminants isolated from clinical specimens on routine bacteriologic media. In the last two decades, however, it has been amply demonstrated that coagulase-negative staphylococci are true etiologic agents of infection in the appropriate clinical setting. The specific risk groups for serious coagulase-negative staphylococcal infections include patients with prosthetic cardiac valves, cerebrospinal fluid shunts, or indwelling catheters.

Recently, critically ill newborns in neonatal intensive care units (NICU) have been added to the list of patients at higher risk for acquiring severe coagulase-negative staphylococcal infections. The care of the newborn infant has been altered considerably in recent years. With the growing admission rates of low-birth-weight (LBW) and very-low-birth-weight (VLBW) infants and the advent of total parenteral nutrition (TPN) and widespread use of intravenous catheters, the bacterial pathogens isolated from neonatal infections have been changing. Within the past five years, the role of coagulase-negative staphylococci as a pathogen in neonatal infections has been

KARA A. TRIMBLE, B.S.*

RICHARD B. CLARK, Ph.D.

Department of Medical Microbiology, Creighton University School of Medicine, Omaha, Nebraska 68178

increasingly documented by hospitals worldwide. Reports indicate that coagulase-negative staphylococci are the infecting agents in 28% to 69% of true neonatal bacteremias.^{1, 2} As bacterial sepsis remains one of the leading causes of perinatal morbidity and mortality, an analysis of the changing trends in the infecting organism of the newborn host is of paramount importance.

Blood cultures from which coagulase-negative staphylococci have been isolated should be considered potentially indicative of true disease when growth of the organism occurs in both aerobic and anaerobic blood culture bottles within 48 hours of collection. Three parameters which have been utilized to define "bacteremia" include:

1. positive blood cultures
2. clinical evidence, and
3. laboratory values indicative of sepsis

*Address to whom reprint requests should be submitted: Kara A. Trimble, Department of Medical Microbiology, Creighton University School of Medicine, Omaha, Nebraska 68178, (402) 280-2921.

The clinical signs indicative of sepsis include increased episodes of apnea and bradycardia (or tachycardia), feeding intolerance, lethargy, irritability, and temperature instability. They also showed abdominal distension, gastrointestinal disturbance, hypotension or poor perfusion, pallor and/or cyanosis. Laboratory findings consistent with coagulase-negative staphylococcal infections in infants may include either leukocytosis or leukopenia. Usually there is an increase in the immature granulocyte fraction. Electrolyte disturbances, including metabolic acidosis and hypoglycemia, may occur.

The high incidence of coagulase-negative staphylococcal bacteremia may be reflective of a change in the care and management of neonates. Improved techniques in life support systems have given LBW (≤ 2500 g) and VLBW (≤ 1500 g) infants a favorable chance of survival beyond the initial critical period when cardiopulmonary insufficiency is the immediate management problem. This has resulted in a growing number of LBW and VLBW infants in the NICU. A considerable number of these infants are chronically ill and require aggressive approaches to care, such as prolonged mechanical ventilation and catheterization for parenteral nutrition. Developmental deficiencies limited life in the pre-ventilation NICU. Today it is the immature immune system of the neonate and the resultant increase in susceptibility to infection that may be the most important determinant of survival.^{1, 3, 4}

A number of factors are important for increasing the risk of sepsis in neonates. Foremost is the incompletely developed immune system of the neonate. Neonates are known to have decreased phagocytic functions which may reduce their ability to clear the staphylococcal organism from blood. In addition, low IgG, IgM, and complement levels reduce the infant's ability to resist infection.^{4, 5} The principal factor selecting for disease is the complexity of modern-day therapies which often include invasive procedures and placement of indwelling foreign bodies, such as intravascular cannulation for monitoring and parenteral nutrition. Critical to the association of bacteria and the foreign body is the adherence of the bacteria to the foreign body surface. Adherence is mediated physiologically by an exopolysaccharide glycocalyx or "slime" which is produced by the organism under

appropriate conditions. This "slime" interacts with various materials used in the manufacture of catheters. The ability of coagulase-negative staphylococci to adhere to and multiply on catheter surfaces seems to correlate directly with virulence. Davenport, et al.,⁶ reported that there was a strong association between clinically significant episodes of infection and "slime" production in patients with prosthetic devices. Thus, the unsatisfactory host immune-inflammatory responses may be magnified in the presence of "slime" positive staphylococci. Contamination of total parenteral nutrition by coagulase-negative staphylococci has also been identified as a significant risk factor in the acquisition of bacteremia with these organisms.

Finally, let us turn our attention to the clinical management of coagulase-negative staphylococcal bacteremia. The standard treatment involves antimicrobial therapy in combination with the removal of any foreign body. The combination of antibiotic therapy and foreign body removal improves the outcome in patients with infections due to slime positive organisms.⁶

Treatment of coagulase-negative staphylococcal infections has been complicated recently by organisms that are resistant to a wide range of antimicrobial agents including the penicillins and semisynthetic penicillinase-resistant penicillins (oxacillin, cloxacillin, dicloxacillin, methicillin and nafcillin). It has been documented that the overuse of antimicrobial therapy in the NICU has lead to the selection of resistant organisms.³ This resistance makes empiric selection of antimicrobial therapy difficult and susceptibility tests imperative. Because of the prevalence of methicillin-resistant coagulase-negative staphylococcal, suggested guidelines for the susceptibility testing of these organisms should be followed.⁷

The extent of cephalosporin cross-resistance shown by methicillin-resistant organisms causes additional confusion. In general, there is agreement that cross-resistance is complete despite apparent cephalosporin activity *in vitro*. All methicillin-resistant coagulase-negative staphylococci should be considered resistant to all currently available beta-lactam antibiotics (old and new penicillins and all generations of cephalosporins) despite susceptibility reports.^{2, 8, 9} Thus, vancomycin hydrochloride has become the antibiotic of

choice for both empiric treatment of coagulase-negative staphylococcal infections and for the treatment of those infections involving methicillin-resistant organisms.^{2-4, 8, 9} If there is an inadequate response to vancomycin alone, then the addition of gentamicin or rifampin should be considered. Rifampin or gentamicin should never be used alone to treat coagulase-negative staphylococcal infections. The use of antibiotics such as trimethoprim-sulfamethoxazole, teichoplanin, coumermycin and the quinolones, such as ciprofloxacin, require further study.

Summary

The frequency and significance of isolation of coagulase-negative staphylococci from blood cultures of neonates is now being recognized. Clinicians must be made aware of this potential pathogen. Reports on septic neonates within neonatal intensive care units indicate that isolation of coagulase-negative staphylococci, once considered culture contamination, has increased over the past several years. This increase has occurred concurrent with the advances in neonatal care. Positive blood cultures, in combination with clinical and laboratory evidence of bacteremia, should be followed by appropriate therapy.

References

1. LaGamma E, Drusin L, Mackles A, Machalek S and Auld P. Neonatal infections: An important determinant of late NICU mortality in infants less than 1,000g at birth. *Am J Dis Child* 137:838-841, 1983.
2. Baumgart S, Hall S, Campos J and Polin R. Sepsis with coagulase-negative staphylococci in critically ill newborns. *Am J Dis Child* 137:461-463, 1983.
3. Anday E and Talbot G. Coagulase-negative staphylococcus bacteremia - A rising threat in the Newborn infant. *Am Clin Lab Sci* 15:246-251, 1985.
4. Fleer A, Gerards L, Aerts P, Westerdal N, Senders R, van Dijk H and Verhoef J. Opsonic defense to staphylococcus epidermidis in the premature neonate. *J Infect Dis* 152:930-937, 1985.
5. Scherer L, West K, Weber T, Kleiman M and Grosfeld J. Staphylococcus epidermidis sepsis in pediatric patients: Clinical and therapeutic considerations. *J Pediatr Surg* 19:358-361, 1984.
6. Davenport D, Massanari R, Pfaller M, Bale M, Streed S and Hierholzer W Jr. Usefulness of a test for slime production as a marker for clinically significant infections with coagulase-negative staphylococci. *J Infect Dis* 153:332-339, 1986.
7. Thornsberry C. Methicillin-resistant (heteroresistant) staphylococci. *The Antimicrob Newslett* 1:43-47, 1984.
8. Davies A, Clewett J, Jones A and Marshall R. Sensitivity patterns of coagulase-negative staphylococci from neonates. *J Antimicrob Chemother* 17:155-160, 1986.
9. Lowly F and Hammer S. Staphylococcus epidermidis infections. *Ann Intern Med* 99:834-839, 1983.

CASE REPORT

Cough Induced Avulsion of the Lesser Trochanter

ISOLATED trochanteric avulsion is an extremely uncommon injury, comprising less than 1% of all fractures of the hip.¹ Most cases occur in children and teenagers, likely due to the fact that the center of ossification of the lesser trochanter appears between the ages of 8 and 12 and fuses with the femoral shaft as late as age 18. In these instances, injury is usually preceded by significant athletic or muscular activity involving abduction and hyperextension.² Several cases of trochanteric avulsion in adults occurring with no or trivial precipitating trauma have been described as a sign of previously undiagnosed metastatic cancer.³

Case Report:

A sixty-one year old white male originally presented in March, 1983 with complaint of progressive hoarseness and dysphagia over 15 months. Barium swallow radiograph showed esophageal obstruction, and endoscopy with biopsy revealed a poorly differentiated squamous carcinoma between 20.5 and 23 cm distally. Computed Tomography staging suggested confinement of the neoplasm to the esophagus, and chemotherapy with Cisplatin, Vinblastine, and Bleomycin was given. Three weeks later a total esophagectomy with gastric interposition and creation of a feeding jejunostomy was performed. Pathologic study of the resected specimen showed squamous carcinoma present at the proximal margin and two of six positive regional lymph nodes. Chemotherapy was repeated on day 35. Subsequently, he received 5,040 cGy in 28 fractions to the upper mediastinum. Followup endoscopy at yearly intervals disclosed a stricture at the anastomotic site at 20 cm. He required periodic transesophageal dilatation.

In February 1986, he was noted to have a right supraclavicular mass which on biopsy again revealed squamous cell carcinoma. The area was treated with 5,000 cGy in 25 fractions. Followup thoracic Computed Tomography scan and a bone scan were both

JAKE R. GRADWOHL, B.A.

Senior Medical Student, Division of Oncology,
Creighton University School of Medicine, Omaha,
Nebraska

JAMES A. MAILLIARD, M.D., F.A.C.P.*

Director, Division of Oncology, Creighton University
School of Medicine, Omaha, Nebraska

clear of any evidence of recurrent or metastatic cancer. In March, 1987, he had a severe coughing episode precipitated by aspiration while drinking tea. At this time, he noted a sudden knife-like pain in the right groin. X-ray revealed an avulsion fracture of the right lesser trochanter. (Figure 1) A subsequent bone scan shows areas of increased tracer uptake in the right ninth rib and the right mid femur (Figure 2).

(See figures page 280)

Summary

Avulsion fracture of the lesser trochanter of the femur following an episode of severe cough is described in a patient with history of esophageal cancer. Trochanteric avulsion is an extremely rare injury in adults. This injury may be an initial manifestation of undiagnosed metastatic disease. It is recommended that adults experiencing this injury be carefully observed for other evidence of metastatic cancer.

Bibliography

1. Dimon JH; Isolated Fractures of the Lesser Trochanter of the Femur. *Clinical Orthopaedics and Related Research*, 1972; 82; 144-148.
2. Green JT, Gay FH; Avulsion of the Lesser Trochanter Epiphysis. *Southern Medical Journal*, Nov. 1956; 49; 1308-1310.
3. Bertin KC, Horstman J, Coleman SS; Isolated Fracture of the Lesser Trochanter in Adults; an Initial Manifestation of Metastatic Malignant Disease. *Journal of Bone and Joint Surgery*, June 1984; 66-A; 770-773.

*Send requests for reprints to: James A. Mailliard, M.D., F.A.C.P., Director, Division of Oncology, Creighton University School of Medicine, 601 North 30th Street, Suite 5700, Omaha, NE 68131



FIGURE I

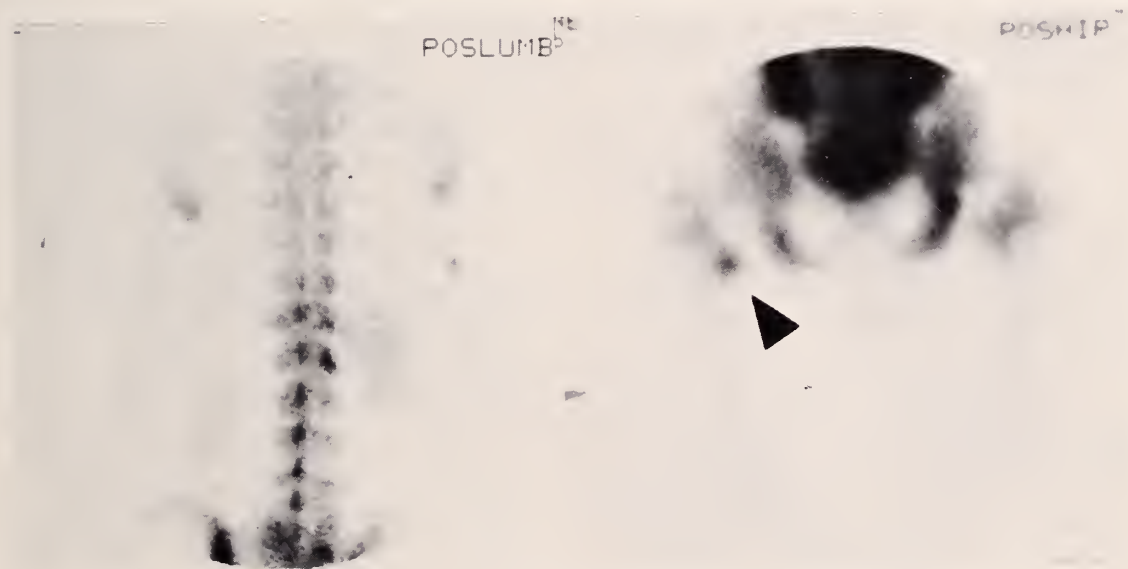


FIGURE II

Bumming it over Christmas

FOR some time now Tom and I have been involved with trying to meet the medical and physical needs of some of the homeless here in Omaha. At times, we have felt ineffective at accomplishing this task and more importantly, ignorant of what their actual needs are. So as an adventure and a learning experience we set out to try to experience what it means to be homeless. For two days over our Christmas holiday in 1985, we decided we would walk the streets of Omaha and explore this lifestyle. We wanted to find out the reasons why people are living on the streets. We wanted to find out what really are their medical and physical needs. Between us, Tom and I have spent seven years working with the homeless and although we were going to be on the streets only two days and not a lifetime as it has been for many of these people, the experience was still challenging, educational, and fun. The purpose of this article is not to rid the world of unemployed and homeless people, but hopefully, share with you a small part of what these people do all day. There are many misconceptions concerning the "street people" and we would like to present some of them for your consideration and enlightenment. Through new insight we may then be able to be more effective in caring for them when they end up in our emergency rooms.

On the Streets

On the evening of December 30th we started off with five dollars each for two days (which seemed like quite a bit for "emergencies"), dressed in clothes that would look the part, and not much else but our minds (which at times proved to be the least useful of the three). The idea of being on the streets seemed new and challenging to me but to Tom it brought back memories of days before medical school when work was hard to find. Some of the initial obstacles to overcome with this adventure were: 1) we were known at one shelter in town and by the people who frequent it, so that place had to be avoided; 2) we had to think solely in terms of how to get basic necessities such as food and shelter, and 3) we had to forget that we were "medical students". With this label comes some pride and a certain

KENNETH P. GROSS
TOM FITZPATRICK
Medical Students, UNMC

amount of assurance that you haven't gotten as far as you have without a certain amount of "brains". This was not really apparent to me until we were unable to catch the right bus which would get us to shelter that night. That's a humbling experience!

The first evening we attempted to catch a bus across town to a new shelter that we understood had just opened. Due to our superior intelligence, we missed the bus and, as it was too far to walk, we tried to find some other place to stay for the night. After stopping in a late night diner for some help and ideas, (it was 15 degrees outside that night), we finally found another place that housed "transients" like us. That takes a lot to get used to being called a "transient" . . . a transient what? The accommodations were nice even though we were out of bed at 6 a.m., finished with breakfast and on the street by 7 a.m. The life of a transient is not that leisurely! Eight o'clock class looks better all the time! At this shelter, transients were not allowed to hang around during the day and they could not stay more than one night every 6 months. They were encouraged to stay and work if you were on "the program". Some locals informed us that even though we were not alcoholics, we could still tell the people at the shelter we were in bad shape, so we could get "on the program" and have a warm place to stay. One old timer commented on how easy it is to find shelter nowadays compared to 'The Depression Days'. During the Depression there weren't many programs or shelters like there are today. Times were rough — even for bums.

When we left after breakfast, we decided to see what jobs were available and so we moseyed on down to a job service center.

There weren't too many jobs that day and if there were, the owner of the job service got almost 50% of your take. We then decided to do what most of the city transients do when they want to get out of the cold — go to the library. Although you can't check any books out, you don't need to, because you can spend all day reading them!

We had heard about the free entertainment places downtown where people could play checkers, chess, cards, etc., so we thought we would check them out. In the meantime, we had heard about a place to stay for that night, but its services did not include supper. Since we had missed lunch at another shelter in town while in the library, we were getting to what was beginning to be a serious medical "emergency" — hunger and cold. With out emergency money were purchased Spam, Hostess pies, fudge bars and orange pop. Not exactly a feast but it was the cheapest and most nutritious dinner we found. We walked about four miles to the shelter but we were informed we had to listen to a sermon before bedding down for the night. It just so happened that we hit the New Years Eve Special (a 2 hour service) that night. That did not go over too well with our traveling companions, but then again beggars can't be choosers. Bedtime was 10 p.m., up at 5 a.m. and back on the streets at 6 a.m. No life of leisure. No one gives you too much time in one spot.

We had a little money left so we ended up our experience with a nice breakfast. A nice way to start the New Year and thankful for the opportunity to walk a mile in someone else's shoes if only for a few days.

Misconceptions

This experience was a profitable one because we found many of our opinions about "transients" were really misconceptions. Hopefully, reading this article will help you to realize that you too may have some misconceptions of the "street people".

1. Everyone on the streets is without money. Not every one on the streets is penniless. Some of them are broke and some are just on their way between seasonal jobs.

2. Everyone on the streets is out for number

one. Whatever it takes to survive is not the general rule, and basically there tends to be a comradery among the street people and anyone else of their kind they meet.

3. All street people are alcoholics or drug addicts. This is far from what we have seen. Granted, there are many who may have had troubles with alcohol and drugs in the past (and maybe 50% currently have these problems), but many were just people who do not work for various reasons. For some a combination of laziness and/or irresponsibility establish their jobless state. A good percentage are mentally or emotionally unstable, either as a cause or effect of their homeless situation. Still others just like the freedom of living on the road and the freedom of traveling when the urge prompts them. Each man or woman has his or her own story and to use sweeping generalizations is a true injustice.

4. They're all looking for a free ride and if you give them an inch, they'll take a yard. Most are just trying to survive and whatever is given is appreciated, but not expected. Put another way, "if you are willing to give it, I won't turn you down".

5. "They're all the same". Each man had his own story and reasons for his situation and therefore, had different needs. When you hear yourself saying, "They're all alike", what you are really saying is "I just don't care" or "I don't want to be involved". We are in a caring profession so we should be aware of this mistake no matter who the patients are we tend to label. (e.g., transients, non-compliant patients, chronics, geriatric).

Summary

There are no easy answers to the question, "What needs do the homeless have that I can meet?" There are many needs and many questions that are not answered. But we learned that one need we can meet is for someone to care, to take an interest in them, and to treat them as an equal — equal human being. We also learned some basics in street survival which might come in handy in the future with increasing malpractice insurance and lawsuits. We too might be jobless and homeless in the future!

X-RAY OF THE MONTH

Teratoma

A 32 year old white female presented to her doctor with a two-week history of vague lower abdominal pain. A supine view of the abdomen revealed a 6 to 7 mm in length calcification within the lower right pelvis resembling a tooth. (Figure) What is your diagnosis?

Teratoma

The term teratoma refers to a group of tumors arising usually from all three forms of germ or totipotential primordial cells of ectoderm, mesoderm and endoderm. Frequently one germ layer predominates and occasionally only one germ cell type exists. Three basic variants are recognized: (1) benign cystic (dermoid) teratomas; (2) mature (undifferentiated) solid teratomas, which may be benign, but are usually malignant, and (3) immature (undifferentiated) or embryonic solid teratomas which are almost always malignant.¹

The cystic or dermoid form differentiates along mainly ectodermal lines and thereby includes elements of skin, hair, sebaceous glands, nails, etc. Frequently well formed teeth are found and occasionally mesodermal cells of cartilage and bone.¹ The epithelium which lines dermoids is constantly desquamating and they are filled with an oily radiolucent substance with a capsule that is fairly radiopaque.² This form is usually found within the ovaries but occasionally within the testes and is benign.

The mature solid forms are composed of a mixed collection of differentiated cells or organoid structures all embedded in a fibrous substance. The benign variant occurs predominately within infants and children. If this form occurs in adults, there is a far greater risk of hidden foci of immature malignant components. In fact, most solid teratomas of the adult do contain such immature tissue which contains cancer; some authors consider all solid adult forms to be malignant with the potential for distant metastatic disease.¹

The three types of germ cells are most concentrated and exist the longest period of

JAMES J. PHALEN

Chief, Radiology Service, V.A. Hospital, Omaha

time in the primitive knot area located at the caudal end of the neural tube. As a result teratomas can arise anywhere within the retroperitoneum, but are most common in the presacral area where they also go by the name of Middledorff tumors.² Subtle calcification are common and most occur in infants and children with a definite female predominance overall. The anlage of the reproductive glands is another common source.



Size varies from very small to markedly large whereby the tumor displaces the bladder and rectum. In contrast to other presacral tumors destruction of bone in the sacrum and coccyx is uncommon unless the tumor grows to a very large size and causes pressure destruction of bone. Overall, 43% have some calcification and

backward tilting of the coccyx is supposedly pathognomonic of a large teratoma.²

References

1. Robbins-Cotran, Pathologic Basis of Disease, WB Saunders, 1979, pp 1226-7.
2. Emmett-Witten, Clinical Urography, Vol. II, WB Saunders, 1971, pp 1222-3.

Alternative Birth Centers: A Four Year Experience at the University of Nebraska Medical Center

MANY maternity centers are responding to increasing consumer demands for changes in maternity care that would support the desire for a more natural childbirth and more personal control during the labor, delivery, and postpartum periods. Families have in the past had to choose between a birthing experience at either a home setting or a hospital with more separation of family members and loss of self control. A home delivery is undesirable by most Nebraska women today because of the recognized increased risk to both the mother and infant.

In response to this dilemma, medical professionals at our medical center developed an alternative birth center to better meet these needs. Obstetric care was to be delivered at a more private, one-room facility on the same floor as our labor and delivery unit. The goal was to provide a more home-like environment while still being consistent with safe and preventative perinatal care. A committee comprised of representatives from our pediatric staff, labor and delivery nursing staff, hospital administration, and local childbirth educators was formed in 1981 to establish policies and operating guidelines. These guidelines were employed for deliveries in the regular labor and delivery unit before the alternative birth center (Birth Center) became a reality in October, 1982. This report reviews our initial four year experience.

All women receiving complete prenatal care at our medical center were informed about the Birth Center option. Those persons interested in delivering at the Birth Center were asked to complete a questionnaire and be interviewed by a staff nurse. The purpose of the meeting was to discuss the policies and operating guidelines and to review the family's specific requests. For the mother to be eligible for delivery at the Birth Center, four criteria had to be met: 1) attendance at a childbirth

KATHERINE HOFFMAN, R.N., M.S.N.*

MARGARET LORKOVIC, R.N.

WILLIAM RAYBURN, M.D.

ROBERT GOODLIN, M.D.

*From the Division of Maternal-Fetal Medicine,
Department of Obstetrics and Gynecology,
University of Nebraska Medical Center, Omaha.*

preparation class, 2) regular prenatal care, 3) authorization by the physician that the pregnancy was low-risk and that the family's birthing requests were acceptable, and 4) availability of a support person during her labor and delivery. The questionnaire also provided space for the parents-to-be to write requests for any special attention during the intrapartum and postpartum periods. Information from the questionnaire and nurse interview was included on the prenatal record to improve communications between the parents and health care providers. If early discharge (within 24 hours after delivery to decrease cost) was anticipated, the parents were required to discuss their plans for infant care with the physician who would be caring for the baby.

All candidates were aware that the Birth Center may already be in use, but their request would be respected in the traditional labor and delivery area. It was also explained that if the pregnancy status became high-risk after the onset of labor, the mother would be transferred to the nearby labor and delivery unit and that she could return to the Birth Center if the problem was resolved. A nurse was to follow these patients closely during labor, recording vital signs and fetal heart rate determinations at least every half hour during the active phase of labor.

*Reprint requests: Katherine Hoffman, R.N., M.S.N., UH 4-W, University of Nebraska Medical Center, Omaha, NE 68105. (402) 559-6336.

Four hundred fifty-one women were found to be eligible for delivery at the Birth Center between October, 1982 and September, 1986. Three hundred forty-four admissions took place at the Birth Center between May, 1982 and September, 1986 which represented 7.2% of all deliveries. The percentage of women requesting to deliver at the Birth Center has remained constant or continued to increase gradually each year.

Table I displays the profiles of the singleton pregnancies delivering at the Birth Center. As expected, this group of low-risk pregnancies was quite different from those which delivered at our regular labor and delivery unit. Perinatal morbidity was negligible, and no deaths were reported. Like their mothers, the infants were also representative of a typically normal patient population (Table I.)

Table I
Profiles of 344 singleton pregnancies
delivering at the Birth Center

Mothers

Age	26 years (16-39 years)*
Parity	32% nulliparous
Race	92% Caucasian

Infants

Gestational age	39.5 weeks (36-43 weeks)
Sex	49% female, 51% male
Apgar scores	
1 minute	8 (5-9)
5 minute	9 (6-10)
Birthweights	3501 g (2410-4493 g)

*mean (range)

This group of healthy mothers who presented for delivery was screened again in early labor before admission to the Birth Center. The primary reason for rejection of admission to the Birth Center was the use of the facility at the time of admission by another mother. If it became available after delivery, the mother and baby were then transferred to that facility for postpartum care. Less common reasons for denial of admission to the Birth Center included meconium in early labor, pregnancy induced hypertension, or breech presentation.

Only a small percentage, 10% (35/344), of women required transfer back to the labor and

delivery unit. A need to induce or augment labor, present in 6.3% (22/344) of such cases, was the most common reason. The indication for use of pitocin was spontaneous rupture of the membranes with inadequate uterine contractions. Intermittent intravenous fentanyl was prescribed for pain relief. A desire for epidural anesthesia (only one case) and a request for excess intravenous narcotic analgesia were less common reasons for maternal transfer. The use of outlet forceps was permitted in the Birth Center but was necessary in only 1.2% (4/344) of cases. An eventual cesarean section in the regular delivery rooms was performed in 1.2% (4/344) of cases. The only indication for surgery involved failure to progress. This primary cesarean section rate in these carefully chosen, low-risk pregnancies admitted to the Birth Center was significantly lower than the 9.6% rate for women laboring in our regular labor unit.

Complications during delivery at the Birth Center included precipitous labor, shoulder dystocia, postpartum hemorrhage, and labial hematoma formation. It was felt that these complications were no more prevalent than in the traditional delivery room, and their management was no different. Sufficient space and lighting were available to manage these conditions in an expeditious manner.

The most frequent perinatal complications included the unpredicted presence of a nuchal cord or meconium stained amniotic fluid. Appropriately-sized, healthy (2500-4000 gm) and vigorous (Apgar scores greater than 7 at 5 minutes) infants were found in 66.3% (228/344) of cases. Individual cases of a spontaneous pneumothorax, chest mass, cleft lip and palate, and transient tachypnea in the newborn which did not require immediate resuscitation, were recorded. The same attention was provided by the pediatric staff as if that infant had been delivered in the regular delivery room.

A review of our patients' written impressions of their experiences revealed many advantages to this alternative birth center. The peripartum care given to the mother offered more of a feeling of flexibility, support and control over pain relief. Natural childbearing was emphasized without technical or medical intervention. Family togetherness with no parent-infant separation provided positive reinforcement. Children were allowed to be

with the parents at delivery, although this did not occur often. A small proportion of women (no record of numbers) delivering at the Birth Center was discharged from the hospital within 24 hours. The lower cost because of early discharge (if desired) and the necessity for fewer rooms and supplies for patient care reduced hospital costs. Resident physician, medical student, and nursing student education was enhanced by appreciating this birthing alternative facility where non-intervention attitudes were emphasized.

A primary limitation of the Birth Center has been its occupancy when another family desired its use. We have been encouraged by its increasing popularity, however, and another Birth Center and labor/delivery/recovery (LDR) room are being planned. Another major limitation of this birthing alternative has been the need for strict criteria for patient eligibility.

Those pregnancies identified as being at risk were excluded perhaps too soon before or during early labor. Permitting short-term electronic fetal heart rate monitoring or using pitocin to augment labor may avoid the need for maternal transfer back to the regular labor and delivery unit.

Results from our four year experience have been promising. This new one room, home-like environment near our labor and delivery unit has allowed the mother to labor and deliver her infant while being supported and assisted by others in a more personalized and private manner. Safety and satisfaction to the family have been confirmed. The reduced hospital time and lack of need for moving the mother and newborn to other sites in the hospital have reduced health care costs. More liberal use of the facility with fewer restrictions is our goal.

LETTER TO THE EDITOR

"Erroneous Elevation of Creatinine Caused by 5-fluorocytosine"

SEVERAL clinical reports have implicated 5-fluorocytosine causing falsely elevated creatinine levels when the Kodak Ektachem analyzer was used.^{1, 2, 3} This problem is well recognized by chemists and mentioned in the Kodak Ektachem brochure but is still not well known to clinicians.⁴

Recently we observed an 83-year-old white male with cryptococcal meningoencephalitis who was treated with 5-fluorocytosine and amphotericin B. Before therapy was initiated, the creatinine value measured in our laboratory was 1.1 (normal 0.15-1.6). His BUN measured 20 (normal 10.0-20.0). Because of the possibility of renal toxicity with amphotericin B, renal function tests were rechecked on the third day of therapy. The creatinine level at that time was 9.8 with a corresponding BUN of 25. Investigation of the laboratory revealed that the creatinine level was determined by the Kodak Ektachem analyzer, which utilizes enzymatic hydrolysis of creatinine to produce ammonia. The amount of ammonia is measured by its reaction to an indicator dye. The color change (dye density) as measured by reflectant spectrophotometry gives the corresponding creatinine level. This method is more sensitive and has less positive and negative interaction than those described by previously widely used Jaffa method, which measures the rate of red chromophore production utilizing the edition of picric acid in an alkaline medium. This is proportional to the amount of creatinine present in the serum. Grossly hemolyzed specimens and direct bilirubin greater than 20 mg/dl have been shown to interfere with the Jaffa method.⁵ In the enzymatic method, the only known interference with creatinine measurement documented is with the 5-fluorocytosine. Since creatinine and cytosine share similar structure, the enzyme acts as a "cytosine iminohydrolase",

ZBIGNIEW WSZOLEK, M.D.

House Officer II, Neurology, University of Nebraska School of Medicine, 42nd & Dewey Ave., Omaha, NE 68105

HOWARD MONSOUR, M.D.

Chief Resident, Internal Medicine, University of Nebraska School of Medicine, 42nd & Dewey Ave., Omaha, NE 68105

PHILIP SMITH, M.D.

Associate Professor, Department of Internal Medicine, University of Nebraska School of Medicine, 42nd & Dewey Ave., Omaha, NE 68105

attacking the amino group and liberating ammonia from approximately 80% of the fluorocytosine molecules.

We suggest that patients being treated with 5-fluorocytosine have their creatinine determinations done by methods utilizing picric acid reaction. If one does encounter an increased creatinine level, "a clue" might be the lack of a parallel rise in BUN. One should then investigate what method of determination the laboratory uses before adjusting doses accordingly.

References

(Kodak Ektachem Analyzer and Falsely Elevated Serum Creatinine Levels)

1. Herrington D, Drusano G, Smalls U, Standiford H: False Elevation in Serum Creatinine Levels. *JAMA*, December 7, 1984, Vol 252, No 21.
2. Mitchell E: Flucytosine and False Elevation of Serum Creatinine Level, *Annals of Internal Medicine*, August 1984, Vol 101, No 2.
3. Mitchell R, Marshall L, Lefkowitz L, Stratton C: Falsely Elevated Serum Creatinine Levels Secondary to the Presence of 5-Fluorocytosine, *AJCP*, August 1985, Vol 84, No 2, p 251.
4. Eastman Kodak Company, Test Methodology, Kodak Ektachem, 1985.
5. DuPont Company, Test Methodology, Crea pack - Dupont ACA, 1984.

President's Page

FEE SPLITTING, WHAT IS IT?

The stimulus for this President's Page was brought about by the discussion in the reference committee and on the floor of the House of Delegates of the AMA. A resolution was brought to the House asking for a study of the current definition of fee splitting because of the recent developments in PPOs, IPAs, HMOs, joint ventures of physicians and hospitals, "gatekeepers", case managers, and other such activities by physicians which appear to endanger the time-honored tradition of referral of patients solely on the basis of the best interest of the patients. This resolution actually refers to the financial arrangements and practice restrictions that are widely used today throughout all the segments of the health insurance industry. In particular, contract provisions based on economic considerations which may restrict the referral of patients.

The reference committee recommended broadening the scope of study to include prescription rebates for medications, prosthesis, glasses, or other medical appliances. Reference was made to the **Current Opinions of the Council on Judicial Affairs of the American Medical Association**, paragraphs 6.04 through 6.06.

"6.04-Fee Splitting. Payment by one physician to another solely for the referral of a patient is fee splitting and is improper both for the physician making the payment and the physician receiving the payment.

"A physician may not accept payment of any kind, in any form, from any source, such as a pharmaceutical company or pharmacist, an optical company or the manufacturer of medical appliances and devices, for prescribing or referring a patient to said source for the purchase of drugs, glasses or appliances.

"In each case, the payment violates the requirement to deal honestly with patients and colleagues. The patient relies upon the advice of the physician on matters of referral. All referrals and prescriptions must be based on the skill and quality of the physician to whom the patient has been referred or the quality and efficacy of the drug or product prescribed.



L. Dwight Cherry, M.D.

"6.05-Fee Splitting: Clinic or Laboratory Referrals. Clinics or laboratories that compensate physicians based solely on the amount of work referred by the physician to the clinic or laboratory are engaged in fee splitting which is unethical.

6.06-Fee Splitting: Drug Prescription Rebates. A physician may not accept any kind of payment or compensation from a drug company for prescribing its products. The physician should keep the following considerations in mind:

- (1) A physician should only prescribe a drug based on his reasonable expectations of the effectiveness of the drug for the particular patient.
- (2) The quantity of the drug prescribed should be no greater than that which is reasonably required for the patient's condition."

In addition, in the State of Nebraska, we have a law, which prohibits fee splitting essentially defined as it is illegal to receive compensation for bringing or referring a patient.

Certainly, there are many gray areas in this practice and organized medicine and each individual practitioner needs to search for proper solutions. One witness at the reference committee suggested that the term "fee splitting" be abandoned because it was in-

flammatory in nature and suggested a euphemism of "practice enhancement procedures." While I agree that the term "fee splitting" is inflammatory, I see no constructive progress being made by changing the name. I certainly

have no solution to this increasing problem and hope that I have stimulated all of you to think about it.

L. Dwight Cherry, M.D.
President



The Auxiliary

AMA AUXILIARY NATIONAL CONVENTION 1987

The sixty-fourth Annual Session of the American Medical Association Auxiliary was held June 21-24 at the Drake Hotel, Chicago, Illinois. Nebraska delegates attending were Bev Kruger, Omaha, Colleen Adam, Hastings, Desta Osborne, Lincoln, and Sally Becker, Norfolk.

The convention opened Sunday, June 21, with National program previews in the areas of AMA-ERF, health projects, legislation, and membership. These previews featured presentations of eight outstanding local auxiliary projects. Each presentation was conducted by an auxiliary leader involved with the project's coordination and implementation. Breakout sessions on each of the four program areas was held following the previews.

AMA Auxiliary President Pat Durham attended the opening of the AMA House of Delegates at the Chicago Hilton Hotel and presented the Auxiliary contribution this year of **\$1,901,350.64** for AMA-ERF.

The AMA Auxiliary House of Delegates opened at 5 o'clock with the Presentation of Colors by the U.S. Army Color Guard of Fort Sheridan, Illinois. All State Presidents were then presented with Colleen Adam representing Nebraska. Roll call showed 342 delegates present. President Pat Durham introduced the resolutions.

The keynote speaker was the Honorable Donald H. Rumsfeld, a former U.S. Secretary of Defense and White House Chief of Staff and

a recipient of the Presidential Medal of Freedom. He is currently a member of President Reagan's General Advisory Committee on Arms Control. Mr. Rumsfeld spoke on "Leadership in America". Following adjournment a reception was held honoring Pat Durham, President, and Betty Szewczyk, President-elect.

The American Medical Political Action Committee (AMPAC) sponsored a breakfast on Monday morning. Reference Committee hearings followed with resolutions concerning bylaws, organizational affairs, and health issues. This structure gave the whole membership the opportunity to speak on these issues. After considering the members' testimony, the committees developed recommendations regarding the resolutions, which were then voted on by the House of Delegates.

Mark Shields, a syndicated columnist was the guest speaker at a luncheon honoring the AMA Auxiliary Past Presidents and Honorary Members on the occasion of the 65th Anniversary of the Auxiliary. A multi-media presentation of "The Auxiliary, A History of Leadership, 1922-87", exhibited all the past presidents accomplishments.

Elected officers of 1987-88 are: President, Betty Szewczyk, IL; President-elect, Mary Strauss, MD; Eastern Regional V.P., Velma Seif, VA; North Central Regional V.P., Ila Lushbough, SD; Southern Regional V.P., Anne Pitchford, TX; Western Regional V.P., Norma Skoglund, OR; Secretary, Jean Hill, MS; Treasurer, Mary Randolph, WA. Directors: East, Joyce West, PA and Bernardine Moloney, NJ; North Central, Marie Hovland, SD

and Ann Rempel, KS; South, Sheila Davis, SC and Priscilla Gerber, FL; West, Peg Gobar, CA and Mary Hanson, CO.

Nebraska delegates met to caucus on Tuesday at 7:00 a.m. to discuss candidates and resolutions. The House of Delegates general meeting opened at 8:30 a.m. and voted on proposed amendments and resolutions. The Budget was adopted as presented. The following Organizational Affairs resolutions were debated but not adopted: 1.) Primary Responsibility of Each Level of the Federation; 2.) Restructuring of Regions; 8.) Attendance at Leadership Confluence by State Members-at-Large. (See State Delegates if further information is desired.)

The following Health Issues resolutions were adopted: 4.) Education on the Hazards of All-Terrain Vehicles (ATVs); 5.) Support for Smoke-free Health Care Facilities; 6.) Participation in the AMA Adolescent Health Initiative; 7.) Education for the Prevention of Elder Abuse; 10.) Continuation of Seatbelt Education and Support of Mandatory Legislation; 11.) Promotion of AIDS Education for Youth.

The bylaws Resolution 3.) AMA Auxiliary Immediate Past President's Membership on the AMA Auxiliary Nomination Committee was adopted.

Bev Kruger gave the Nebraska state report focusing on the Hall County Project. Nebraska received an award for having 75% or more of its members belonging to the Federation. (National, State, and County.)

Oprah Winfrey, talk show hostess and actress was the guest luncheon speaker on Tuesday.

Afternoon voting for the Nominating Committee resulted in the following persons being elected: Pat Durham and Susan Cummins from the Board of Directors; Jeanny Kalaycioglu, Eastern; Chris Bohigian, North Central; Susan Marks and Barbara Tippins, Southern; Sharon Hughes, Western.

President of the AMA, John J. Coury, Jr., M.D., was a speaker at the Wednesday morning session. He thanked the auxiliary for



NMA Auxiliary delegates — Front: Colleen Adam, Hastings. Back: left to right: Desta Osborne, Lincoln, Bev Kruger, Omaha, Sally Becker, Norfolk.

their accomplishments and support. He spoke on the growing AIDS crisis and the need for public education, testing for an antibody to the AIDS virus, providing impetus for behavior changes that minimize the risk of transmitting the AIDS virus, and confidentiality.

New officers were installed by National Past President, (1973-74) Ruth Scrivner. Following the inaugural address by Betty Szewczyk, a buffet luncheon was held honoring the new President and the Board of Directors.

The Nebraska delegation attended the inauguration of AMA President, William Hotchkiss, M.D. at the Chicago Hilton Hotel. State Presidents were presented with Dwight Cherry, M.D. representing Nebraska. Jerald R. Schenken, M.D. Board of Trustees of the AMA was also introduced. The State Auxiliary Presidents were introduced as a whole, with Colleen Adam representing Nebraska.

It was an honor to serve as delegates representing our state in the legislative body of the AMA Auxiliary.

Desta Osborne
President-Elect
NMA Auxiliary

MEDICAL SCHOOL NEWS

C.U. PLANS TO ESTABLISH CHAIR IN MEMORY OF DR. RAYMOND SHADDY

Creighton University announced plans Friday night to establish a \$1 million endowed professorship in operative dentistry in the memory of Dr. Raymond W. Shaddy.

Dr. Shaddy, a 1953 graduate of the Creighton School of Dentistry, joined the university's staff in 1956 as an instructor of prosthetic dentistry.

Dr. Shaddy served as dean of the School of Dentistry from 1962 to 1971. He co-directed the planning and construction for Creighton's Boyne School of Dental Science, completed in 1973.

At the time of his death last July, Dr. Shaddy was an associate vice president for Creighton University Health Sciences Schools.

Plans to establish the Dr. Raymond W. Shaddy endowed professorship were announced Friday at the Creighton School of Dentistry's Annual Alumni Dinner at the Red Lion Inn by Fr. James E. Hoff, S.J., Vice President for University Relations at Creighton.

"Dr. Shaddy was a great friend and teacher of students and an expert at his profession. He helped establish and maintain the very high academic standards that now exist in the School of Dentistry," Fr. Hoff said.

To date, nearly \$500,000 toward the establishment of the \$1 million chair has been pledged through a Shaddy Memorial Fund effort, spearheaded by Dr. John Butkus, former associate dean of the School of Dentistry.

Pledges made thus far toward establishment of the endowed chair largely have come from dental school alumni and friends of Dr. Shaddy, Fr. Hoff said.

"Dr. Butkus quietly went about the formidable task of raising almost \$500,000 of the \$1 million needed to establish an endowed chair. He did this with the intention and hope that others then would come forward to match the amount he raised," Fr. Hoff said.

The Dr. Raymond W. Shaddy professorship would be the sixth endowed chair to be established at Creighton and the first such chair in the Creighton Health Sciences Schools.

"It's very meaningful and fitting that the first endowed professorship in the Health Sciences Schools would be in the memory of a man like Raymond Shaddy. This professorship will assist the School of Dentistry in its endeavor toward maintenance of excellence," said Dr. Gerald C. Brundo, dean of the School of Dentistry.

Chairs such as the one proposed for operative dentistry are specially funded to permit Creighton University to select outstanding scholars and support their teaching, research and scholarly activities.

Pledges received thus far to establish the chair in Dr. Shaddy's name bring the total pledged to the Campaign for Creighton, the University's current fund-raising effort, to \$57 million, Fr. Hoff said. The goal of the five-year campaign is \$70 million.

News from The Robert Wood Johnson Foundation

FIRST ROUND OF GRANTS ANNOUNCED UNDER MEDICAL MALPRACTICE PROGRAM

PRINCETON, N.J., June 29, 1987 — In an effort to alleviate problems related to medical malpractice, The Robert Wood Johnson Foundation today announced \$3.2 million in grants to 14 projects whose efforts will advance knowledge about what constitutes malpractice, what causes it, and how it can be prevented.

Selected from nearly 300 responses to the request for proposals, the projects announced today will receive up to \$300,000 for a one-to-three-year period. A second round of grants will bring the total funding for both rounds to as much as \$6 million.

The projects funded under the Foundation's Medical Malpractice Program aim to: (1) determine whether there are identifiable factors in medical practice or among medical practitioners that can help predict malpractice; (2) improve risk management; (3) assess alternative methods of setting malpractice insurance premiums, including both experience-rating systems and no-fault systems; and (4) evaluate the effectiveness of efforts to reform state tort law.

According to Leighton E. Cluff, M.D., president of The Robert Wood Johnson Foundation, "The high costs of insuring physicians against medical malpractice liability causes several problems for the public. First, it may deprive patients of access to care by some specialists. Second, it contributes to increasing health care costs as physicians raise their fees to cover insurance premiums. And third, it may detract from the quality of care provided, because physicians and hospitals often subject patients to excessive tests or deny them high technology diagnostic or treatment procedures, in order to protect themselves from potential malpractice charges.

"While the Foundation is not prescribing or endorsing any particular solution; we hope that these research projects will offer alternative approaches to handling this serious national problem."

The deadline for submission of proposal

letters for the second and final set of grants under the Medical Malpractice Program is December 1987. Completed applications are due in May 1988, and the grants will be announced in November 1988. For more information about the Program, contact: Phyllis L. Kane, The Robert Wood Johnson Foundation, P.O. Box 2316, Princeton, NJ 08543-2316, (609) 452-8701.

Direction for the Program is being provided by Walter Wadlington, LL.B., James Madison Professor of Law and professor of legal medicine at the University of Virginia.

The Robert Wood Johnson Foundation became a national philanthropy in 1972. Since then, grants in excess of \$750 million have been made to improve health care in the United States.

The Robert Wood Johnson Foundation Medical Malpractice Program

American Registry of Pathology \$192,094/36 months
Major Frank T. Flannery, M.D., J.D.
Chief, Division of Medical-Legal Research
Armed Forces Institute of Pathology
(202) 576-3285

Will identify common diagnostic errors in the emergency department that result in malpractice suits and will test new procedures designed to eliminate misdiagnosis and reduce patient morbidity and mortality.

Amherst College \$95,579/12 months
Department of Economics
James W. Hughes
Assistant Professor of Economics
(413) 542-2249

An economic appraisal of the long-term effects of medical malpractice reform legislation in New York and Massachusetts on the size, frequency, and disposition of medical malpractice claims.

University of California, San Francisco \$166,529/24 months
Institute for Health Policy Studies
Harold S. Luft, Ph.D.
Professor of Health Economics
(415) 476-5146

Will determine whether variation in malpractice claims across hospitals is explained by hospital characteristics, volume of patients, or other variables, and, if so, determine how such variables can be used to design risk-adjusted malpractice insurance premiums.

**Harvard School
of Public Health** **\$273,939/24 months**
Howard H. Hiatt, M.D.
Professor of Medicine
and
Senior Physician
Brigham and Women's Hospital
(617) 732-5155

To study the incidence and costs of malpractice suits using current data from New York State and analyze the adequacy of the current system of tort litigation for malpractice compensation.

Indiana University Foundation **\$260,093/36 months**
Eleanor D. Kinney, J.D., M.P.H.
Assistant Professor Law
(317) 274-4091

Will determine the impact of tort reform on the availability of health care services and the adequacy of compensation for injured patients in Indiana.

Institute for Medical **\$231,060/36 months**
Risk Studies
Don Harper Mills, M.D., J.D., Co-Director
Orley H. Lindgren, Ph.D., Co-Director
Ronald Christensen, Ph.D., J.D., Co-Director
(415) 332-3414

To demonstrate the feasibility and effectiveness of early warning systems for the management of medical malpractice liability claims in self-insured hospitals and medical centers in California; will provide basic knowledge about ways to improve risk management, claims management, and loss prevention.

Johns Hopkins University **\$207,702/24 months**
School of Hygiene and Public Health
Stephen P. Teret, J.D., M.P.H.
Associate Professor
(301) 955-3995

Will determine whether there are predictors of risk for future malpractice that are identifiable during medical school, and will develop guidelines to identify high-risk physicians in training and propose constructive intervention measures.

Johns Hopkins University **\$285,131/36 months**
School of Hygiene and Public Health
Laura L. Morlock, Ph.D.
Associate Professor
Health Services Research and Development Center
(301) 955-6546

Will develop and evaluate a model statewide reporting system designed to improve peer review by hospital medical staffs and the medical profession.

University of Minnesota **\$296,027/30 months**
Medical School
Edward W. Ciriacy, M.D.
Professor and Head
Department of Family Practice and Community Health
(612) 624-7123

A two-part project that will first collect and analyze data from the Twin Cities to determine the true incidence of high-risk pregnancies in Minnesota and evaluate their

medical outcomes, and then analyze state-wide hospital and physician data to target areas for improvement for continuing medical education in obstetrics.

University of Pennsylvania **\$224,650/24 months**
Patricia M. Danzon, Ph.D.
Associate Professor
Health Care Systems and Insurance
(215) 898-6861

Will look at the impact of changes in the tort-based malpractice system on consumer prices, quantity of services provided, physician income, and choice of practice location and specialty; will analyze the strengths and weaknesses of alternative systems for compensation and deterrents relative to the current tort system.

The Private Adjudication **\$284,421/36 months**
Center, Inc.
Duke University School of Law
Neil Vidmar, Ph.D.
Vice President for Research
The Private Adjudication Center
(919) 493-7770

Thomas B. Metzloff, J.D.
Associate Professor
Duke University School of Law
(919) 684-2636

Will analyze the effectiveness of existing procedures and then design, implement, and evaluate alternative procedures.

Stanford University School **\$200,865/14 months**
of Medicine
John P. Bunker, M.D.
Professor of Family, Community and
Preventive Medicine and Anesthesia
(415) 723-6426

To determine whether the recent imposition of specific professional practice standards for anesthesiologists in California and several other states improves medical outcomes and reduces the risk of malpractice claims, will explore the implications of specific practice standards on other specialties, specifically obstetrics.

University of Texas Health **\$300,000/24 months**
Science Center
at Houston
Laurence R. Tancredi, J.D., M.D.
Director, Health Law Program
(713) 792-4813

Will test the feasibility of instituting a no-fault system of medical malpractice compensation.

Vanderbilt University **\$225,659/24 months**
Frank A. Sloan, Ph.D.
Director, Health Policy Center
(615) 322-8530

To explore the potential effects and feasibility of two insurance reforms for medical malpractice: limiting damage awards to specific, scheduled amounts and experience-rating of insurance premiums.

Welcome New Members

Thomas C. Smyrk, M.D.
601 N. 30th St.
Omaha, NE 68131

Brent V. Stromberg, M.D.
601 N. 30th St.
Omaha, NE 68131

Anthony J. Moulton, M.D.
Dept. of Surgery
UNMC - 42nd & Dewey
Omaha, NE 68105

Michael L. Nahrwold, M.D.
Dept. of Anesthesiology
UNMC - 42nd & Dewey
Omaha, NE 68105

Bert C. Frichot, III, M.D.
360 Doctors Bldg., N. Tower
Omaha, NE 68131

Laurence Rudolph, M.D. (reinstated)
David City
Nebraska 68632

Gay C. Gilmore, M.D.
Box 523
Crawford, NE 69339

Edward A. Metz, D.O.
Box 523
Crawford, NE 69339

In Memoriam

*By medicine life may be prolong'd
yet death*

Will seize the doctor too.

—Shakespeare

MARJORIE M. C. KWAN, M.D. (Born November 9, 1923 - died April 11, 1987) Medical Specialty — Family Practice. Doctor Kwan was a graduate of West China Union University Medical School in Chengtu, China, in 1948, and practiced in Lincoln. She was a member of the Nebraska Medical Association and the American Medical Association.

SAMUEL THIERSTEIN, M.D. (Born November 3, 1905 - died April 17, 1987) Medical Specialty — Obstetrics & Gynecology. Doctor Theirstein was a graduate of the University of Kansas School of Medicine in Lawrence, Kansas, in 1937, and practiced in Lincoln. He was a member of the Nebraska Medical Association and the American Medical Association.

MAURICE D. FRAZER, M.D. (Born April 2, 1911 - died May 15, 1987) Medical Specialty

— Radiology. Doctor Frazer was a graduate of the University of Nebraska College of Medicine in 1937 and practiced in Lincoln. He was a member of the Nebraska Medical Association and the American Medical Association. Doctor Frazer is survived by his wife, Margaret; daughters and sons-in-law, Patricia and LeRoy Svec, Boone, Iowa; Betty and Bruce Anderson, Lincoln; sister, Maxine Frazer of Lincoln; grandchildren, Michael, Deborah, Pamela, Amanada Svec, Melissa, Rex and Sara Anderson.

C. D. BELL, M.D. (Born November 7, 1905 - died June 11, 1987) Medical Specialty - Dermatology. Doctor Bell was a graduate of the University of Michigan Medical School in 1931 and practiced in Lincoln. He was a member of the Nebraska Medical Association and the American Medical Association.

Coming Meetings

NMA FALL SESSION — September 10-12, 1987, Cornhusker Hotel.

NMA ANNUAL SESSION — April 29-May 2, 1988, Omaha Marriott.

NMA FALL SESSION — September 22-24, 1988, Cornhusker Hotel.

UNIVERSITY OF NEBRASKA MEDICAL CENTER

CARDIOVASCULAR DISEASE PREVENTION IN THE YOUNG AND THE ADULT — August 2-5, 1987 at the Snowmass Club, Snowmass, Colorado. Sponsored by UNMC.

UNIVERSITY OF NEBRASKA COLLEGE OF MEDICINE ALUMNI ASSOCIATION — JOHN S. LATTA CENTENNIAL LECTURESHIP — August 27-28, 1987, UN Medical Center Campus, Omaha, Neb. EVERYONE INVITED.

UNIVERSITY OF NEBRASKA COLLEGE OF MEDICINE ALUMNI ASSOCIATION — ALUMNI COCKTAIL RECEPTION — Tuesday, September 15, 1987, 5:30 to 7:00 p.m. — Fairmont Hotel, San Francisco, Calif. — in conjunction with the American Academy of Family Physicians meeting. All alumni, spouses and friends are invited. Hors D'oeuvres and Cash Bar.

EMERGENCY MEDICINE REVIEW — September 21-26, and October 5-10, 1987 at the Center for Continuing Education, UNMC, Omaha, NE 45 hours of ACEP Category I credit and 45 prescribed hours by the AAFP and AMA Category I.

UNIVERSITY OF NEBRASKA COLLEGE OF MEDICINE ALUMNI ASSOCIATION — ALUMNI ROUNDUP AND RECEPTION in Omaha — Monday, October 26, 1987, 6-7:30 p.m., Red Lion Inn Ballroom — in conjunction with the Omaha Mid-West Clinical Society Postgraduate Assembly. Hors D'oeuvres and Cash Bar. All alumni, spouses, faculty, friends and students are

cordially invited. Followed at 7:45 p.m. with 50-year Dinner honoring the CLASS of 1937 - Nebraska Room, Red Lion Inn. CLASS REUNIONS will be held October 25 and October 27 for classes ending in "7" and "2".

For further information or to register for the above courses contact: Marge Adey or Brenda Ram, Center for Continuing Education, University of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, Nebraska 68105. Telephone (402) 559-4152.

UPCOMING UNMC CONTINUING EDUCATION COURSES

ADVANCED TRAUMA LIFE SUPPORT — March 23-24, May 28-29, September 28-29, 1987. Omaha, Nebraska. Fee: \$475. 17.0 Hours AMA Category I. 17.0 Prescribed Hours AAFP. 17.0 Hours ACEP Category I. For further information on these three courses contact Cindy S. Hanssen, University of Nebraska Medical Center, Center for Continuing Education, 42nd & Dewey Avenue, Omaha, Nebraska 68105-1065. Phone (402) 559-4152. In Nebraska, call: 800-228-1095. All other states, call: 800-228-9630.

For further information, contact Ann Fitzgerald, University of Nebraska Medical Center, Center for Continuing Education, 42nd & Dewey Avenue, Omaha, Nebraska 68105-1065. Phone (402) 559-4152. In Nebraska, call: 800-228-1095. All other states (except Alaska), call: 800-228-9630.

CREIGHTON UNIVERSITY

PEDIATRIC RHEUMATOLOGY — August 6-8, 1987, The Boys Town National Institute, Omaha, Nebraska. Program Director:

James T. Cassidy, M.D. Fee: TBA. Credit Hours: TBA.

HYPERTENSION: YESTERDAY, TODAY & TOMORROW — August 15, 1987, Aksarben, Omaha, Nebraska. Program Director: Syed M. Mohuiddin, M.D. Fee: \$15 advanced registration; \$25 day of conference - 4 credit hours Category 1.

LASER LAPAROSCOPY & HYPERTENSION WORKSHOP — August 28-29, 1987, Criss Building, Creighton University School of Medicine. Program Director: Thomas S. Pruse, M.D. Fee: \$550 - 14 Cognates ACOG.

FAMILY MEDICINE UPDATE — September 5-6, 1987, The Lodge at Okoboji, Fee: TBA. Credit Hours: TBA.

AMERICAN MEDICAL WOMEN'S ASSOCIATION REGIONAL CONFERENCE — September 19-20, 1987, Holiday Inn Central, Omaha, Nebraska. Program Coordinator: Rose Faithe, M.D. Fee: TBA, Credit Hours: TBA.

A DAY WITH THE PERINATOLOGISTS — September 25-26, 1987, Red Lion Inn, Omaha, Nebraska. Program Director: Washington C. Hill, M.D. Fee: TBA, Credit Hours: TBA.

CONTROVERSIES AND CLINICAL MANAGEMENT IN HIGH RISK OBSTETRICS — October 29-31, 1987, Claremont Resort Hotel, Oakland, California. Program Director: Washington C. Hill, M.D. Fee: \$350 for physicians, \$240 for nurses and residents if paid before Sept. 29. 16.5 credit hours Category 1.

VISITING PROFESSOR SCHEDULE — 1987

September 11-12, 1987

John Cameron, M.D., Surgeon-in-Chief, The John Hopkins University, Department of Surgery, Baltimore, Maryland.

October 23-24, 1987

Hiram C. Polk, Jr., M.D., Professor and Chairman, Department of Surgery, University of Louisville, School of Medicine, Louisville, Kentucky.

For further information or to register, contact: Creighton University School of

Medicine Division of CME, Omaha, NE 68178, 402-280-2550 or outside Nebraska Toll free 800-228-7212, Ext. 2550. The Creighton University School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.

UNIVERSITY OF COLORADO SCHOOL OF MEDICINE Summer and Fall 1987

THIRTIETH ANNUAL PEDIATRIC PROGRAM — August 3-6, 1987, Given Institute of Pathobiology, Aspen, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

THIRTEENTH ANNUAL PRIMARY CARE ORTHOPEDICS — August 6-11, 1987, Given Institute of Pathobiology, Aspen, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

PERINATAL MEDICINE CONFERENCE — August 7-10, 1987, Snowmass Conference Center, Snowmass Village, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

ASPEN BASIC SCIENCE: RECEPTORS AND DISEASE — August 12-15, 1987, Given Institute of Pathobiology, Aspen, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

RENAL DISEASE FOR THE INTERNIST AND NEPHROLOGIST — August 17-21, 1987, Given Institute of Pathobiology, Aspen, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

FIFTH ANNUAL INTERNAL MEDICINE BOARD REVIEW — August 24-28, 1987, Denver, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

FAMILY PRACTICE REVIEW — October 5-10, 1987, Denver, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

UNIVERSITY OF KANSAS

For information concerning the following continuing education offerings sponsored by the University of Kansas Medical Center contact: Carole Rosen, Promotions Coordinator, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Boulevard, Kansas City, KS 66103 (913) 588-4480.

NUTRITION CONCERNS FOR WOMEN: A SYMPOSIUM FOR HEALTH PROFESSIONALS — September 25, 1987. Sponsored by the University of Kansas Medical Center, Kansas City, Kansas. Credit: AMA, AAFP, CNE, ADA. Contact: Eileen Buttron, University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103, (913) 588-4480.

ALLERGY, IMMUNOLOGY AND RHEUMATOLOGY: REVIEW AND UPDATE — October 9-10, 1987 at the University of Kansas Medical Center. Sponsored by the

University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103. Credit: Category I AMA, AAFP. Contact: Eileen Buttron, University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103, (913) 588-4480.

MEDICINE AND RELIGION: ISSUES IN THE EIGHTIES — October 20-21, 1987 to be held at Kansas City, Kansas. Sponsored by University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103. Credit: AMA, AAFP, CNE, SW, Clergy. Contact: Eileen Buttron, University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103, (913) 588-4480.

NATIONAL JEWISH CENTER FOR IMMUNOLOGY AND RESPIRATORY MEDICINE

NATIONAL JEWISH CENTER FOR IMMUNOLOGY AND RESPIRATORY MEDICINE KEYSTONE SUMMIT — February 3-7th, 1988 at Keystone Colorado. A tribute to: Richard Farr, M.D. Topics: Allergy, Asthma, Pharmacology, Advances in Immunology, Diagnostic Testing and more. Registration fee: \$325.00 — \$165.00 for Allied Health and Physicians in Training. 16.5 hours of AMA Category 1 Credit. For brochure and more information contact: Jeri Wagner, National Jewish Center for Immunology and Respiratory Medicine, 1400 Jackson Street, Denver, CO 80206, 303-398-1000.

AMA News Notes

(continued from page 14A)

tatives to support legislation banning tobacco advertising.

"Dear Representative," the black-bordered card says, "I wish to inform you that one of your constituents, who was a patient of mine, has died. The death was due to the following disease: lung cancer, other tobacco-related cancer (includes mouth, larynx, esophagus cancer), chronic obstructive lung disease (includes emphysema), coronary heart disease, other tobacco-related vascular disease.

"This person was a smoker or a smokeless tobacco user. Tobacco use is the major avoidable cause of this disease.

"I urge you to co-sponsor and actively support legislation (such as HR 1272) that would prohibit the advertising and promotion of this uniquely harmful product. Please keep this person's tobacco-related death in mind as you consider this issue."

In making the cards available, James H. Sammons, M.D., AMA Executive Vice President, said the idea was to recruit more sponsors for the AMA-sponsored legislation now before Congress.

* * *

Two AMA telephone surveys that are aimed at determining current physician practice patterns are now under way, and some physicians already have been interviewed by one of two independent surveying organizations engaged for the projects.

One of them is the twice-a-year Socioeconomic Monitoring System (SMS) survey that is being conducted by Mathematica Policy Research in Princeton, NJ. The survey's purpose of the survey is to collect current information on physician fees, incomes, work hours, and patient volumes, MPR plans to complete this project, entailing 4,000 interviews, in July.

In the other project, the AMA has commissioned the Robert Wood Johnson Foundation to interview 6,000 young M.D.s to determine their practice patterns and career decisions. This project will continue until October.

* * *

Data from the AMA's Socioeconomic Monitoring Survey indicate that the rising cost of professional liability insurance and a rising incidence of claims against physicians remain a significant problem for the medical profession.

Researchers from the AMA's Center for Health Policy Research note in their most recent *SMS Report* that claims went up to the point where nearly 9% of all physicians faced at least one claim during 1985.

Specific data indicate:

- The average annual rate of claims increased from 10.1 per 100 physicians in 1985 from an average annual rate of 8.2 in the previous four years.

- Professional liability insurance premiums averaged \$10,000 in 1985. Obstetricians/gynecologists paid the most, on average, with a premium of \$23,000.

- Adjusted for inflation, about one quarter of increased revenue of the average self-employed physician from 1982 to 1985 was used to pay for higher premiums.

* * *

Analysts at the AMA Center for Health Policy Research are saying that extreme measures to restrict the number of individuals entering the field of medicine would not reverse a physician surplus first identified in 1980 by the Graduate Medical Education National Advisory Committee (GMENAC).

The center has just published this and other findings in a monograph titled, *The Demographics of Physician Supply: Trends and Projections*. This is the first product of an expanded AMA research agenda, and focuses on medical manpower scenarios to the year 2000.

First produced as an internal AMA report (AMN, April 10, 1987), the monograph, taking data from the AMA Physician Masterfile, concludes, for example, that reducing the FMG population to zero would have a net effect, by the year 2000, of producing only 40,000 fewer physicians.

(continued on page 19A)

The complete journal for family practice physicians

- Reaches 79,000 family physicians monthly
- Presents the most commonly seen patient problems in family practice
- Written by physicians for physicians
- The most current clinical updates in:

Cardiology	Ob/Gyn
Diabetes	Psychiatry
Pediatrics	Gastroenterology
- Provides 20 hours of CME Category 1 Credit

PRACTICAL • CLINICAL • EDUCATIONAL • CURRENT



AMA News Notes

(continued from page 300)

The book details medical manpower trends and, according to center researchers, can be used by M.D.s in making informed career choices.

For price and ordering information, write Book and Pamphlet Fulfillment OP-235, AMA, P.O. Box 10946, Chicago, Ill. 60610-0946.

* * *

Reflexology, dimethyl sulfoxide (DMSO), and colonic irrigation are among the treatments mentioned in a new booklet on quackery now available from the California Medical Assn.

Developed by the CMA's Committee on Health Education of the Public, the booklet, titled, *The Professional's Guide to Health & Nutrition Fraud*, is a manual for health professionals on how to combat dubious health practices.

"Health care professionals must develop a

(continued on page 23A)



Physicians who have thoroughly investigated their choices are selecting MDX* medical data software.

*MDX is a trademark of Calyx, Inc.

MDX

Call us about the multi-user, multi-tasking MDX system. We will send you a video tape presentation.



INFO-BUILDERS, INC.

402/331-2546
11203 JOHN GALT BOULEVARD
OMAHA, NEBRASKA 68137

Providing complete installation, training and support services.

Nebraska Medical Association Officers and Commissions

OFFICERS

L. Dwight Cherry, M.D., Lincoln..... President
C. A. McWhorter, M.D., Omaha..... President-Elect
Robert F. Shapiro, M.D., Lincoln..... Secretary-Treasurer
William L. Schellpeper, Lincoln..... Executive Director
James K. Ruigh, Lincoln..... Assistant Executive Director

AMA Delegates — C. J. Cornelius, Jr., M.D., Sidney;
John D. Coe, M.D., Omaha; Louis J. Gogela, M.D.,
Lincoln; Blaine Y. Roffman, M.D., Omaha.

BOARD OF DIRECTORS

L. Dwight Cherry, M.D., Kearney..... Chairman
C. A. McWhorter, M.D., Omaha..... Vice-Chairman
Robert F. Shapiro, M.D., Lincoln..... Secretary-Treasurer
Hiram W. Walker, M.D., Kearney..... Past President
Paul E. Collicott, M.D., Lincoln.....
Richard A. Raymond, M.D., O'Neill.....
Donald J. Pavelka, M.D., Omaha.....
Richard H. Meissner, M.D., Omaha.....
Harry R. McFadden, M.D., ProTem..... Omaha
C. T. Frerichs, M.D., Beatrice.....

COMMISSION ON ASSOCIATION AFFAIRS

Harry W. McFadden, M.D., Chairman..... Omaha
R. A. Blatny, M.D., Fairbury.....
Stuart P. Embury, M.D., Holdrege.....
Joel T. Johnson, M.D., Kearney.....
Bernard L. Kratochvil, M.D., Omaha.....
Walter O'Donohue, M.D., Omaha.....
Herbert E. Reese, M.D., Lincoln.....
Joseph E. Stitche, M.D., Lincoln.....
R. C. Weldon, M.D., Nebraska City.....

SCIENTIFIC SESSIONS COMMITTEE

Sushil A. Lacy, M.D., Chairman..... Lincoln
Mark A. Christensen, M.D., Convention Chairman..... Omaha
David L. Bacon, M.D., Kearney.....
Robert A. Beer, M.D., Omaha.....
Mark A. Christensen, M.D., Omaha.....
Richard A. Hranac, M.D., Kearney.....
Donald J. Larson, M.D., Lincoln.....
Richard M. Tempero, M.D., Omaha.....
Donald E. Waltemath, M.D., Lincoln.....
Rick J. Windle, M.D., Lincoln.....
Richard S. Yates, M.D., Lincoln.....
Eugene M. Zweihack, M.D., Omaha.....

COMMISSION ON MEDICAL SERVICES

William L. Rumbolz, M.D., Chairman..... Omaha
Carl J. Cornelius, Jr., M.D., Sidney.....
Richard A. Hranac, M.D., Kearney.....
F. William Karrer, M.D., Omaha.....
Dale E. Michels, M.D., Lincoln.....
Merton Quaife, M.D., Omaha.....
Kenton L. Shaffer, M.D., Kearney.....

AD-HOC COMMITTEE ON MATERNAL & CHILD HEALTH

Kenton L. Shaffer, M.D., Chairman..... Kearney

Section on Maternal Mortality Review

George M. Adam, M.D., Hastings.....
James G. Cummins, M.D., Omaha.....
L. Palmer Johnson, M.D., Lincoln.....
Gary D. Milius, M.D., Lincoln.....
William F. Rayburn, M.D., Omaha.....
William L. Rumbolz, M.D., Omaha.....
Larry Wilson, M.D., Gothenburg.....

Section on Perinatal Mortality Review

Lawrence C. Bausch, M.D., Lincoln.....
Stacie R. Bleicher, M.D., Lincoln.....
Robert M. Nelson, M.D., Omaha.....
Gregg F. Wright, M.D., Lincoln.....

AD-HOC COMMITTEE ON GERIATRICS

Richard A. Hranac, M.D., Chairman..... Kearney
Ronald L. Asher, M.D., North Platte.....
James Carraher, M.D., Lincoln.....
J. Whitney Kelley, M.D., Omaha.....
Jane F. Potter, M.D., Omaha.....
Richard Thompson, M.D., Lincoln.....
John A. Ursick, M.D., Omaha.....
Vernon G. Ward, M.D., Omaha.....

AD-HOC COMMITTEE ON ALTERNATE HEALTH PLANS

Dale E. Michels, M.D., Chairman..... Lincoln
Lonnie S. Albers, M.D., Lincoln.....
Vernon F. Garwood, M.D., Lincoln.....
Robert L. Haag, M.D., Lincoln.....
Michael J. Haller, M.D., Omaha.....

Roger D. Mason, M.D., Omaha.....
Margaret A. Moravec, M.D., Lincoln.....
Richard H. Meissner, M.D., Omaha.....
Dwayne J. Peetz, Jr., M.D., Omaha.....
Layton F. Rikkers, M.D., Omaha.....
Sebastian J. Troia, M.D., Omaha.....

COMMITTEE ON HEALTH PLANNING

Carl J. Cornelius, Jr., M.D., Chairman..... Sidney
Gordon D. Adams, M.D., Norfolk.....
Lewiston W. Birkmann, M.D., Lincoln.....
James S. Carson, M.D., McCook.....
Chris C. Caudill, M.D., Lincoln.....
Allen D. Dvorak, M.D., Omaha.....
Dale W. Ebers, M.D., Lincoln.....
Louis J. Gogela, Jr., M.D., Beatrice.....
Roger D. Mason, M.D., Omaha.....
Donald F. Prince, M.D., Minden.....
C. Lee Retelsdorf, M.D., Omaha.....
Thomas H. Wallace, M.D., Gordon.....

AD-HOC COMMITTEE ON TUMOR REGISTRY

F. William Karrer, M.D., Chairman..... Omaha
Elvin G. Brown, M.D., Hastings.....
John H. Casey, M.D., Lincoln.....
James R. Commers, M.D., Omaha.....
Sushil S. Lacy, M.D., Lincoln.....
Donald R. Owen, M.D., Omaha.....
C. Lee Retelsdorf, M.D., Omaha.....
Ron D. Scott, M.D., Kearney.....

AD-HOC COMMITTEE ON LOW LEVEL

RADIATION WASTE DISPOSAL

Merton A. Quaife, M.D., Chairman..... Omaha
Prentiss M. Dettman, M.D., Lincoln.....
Allen D. Dvorak, M.D., Omaha.....
David J. Hoelting, M.D., Pender.....
Ernest O. Jones, Ph.D., Omaha.....
Martin R. Lohff, M.D., Omaha.....
W. E. Lundak, M.D., Lincoln.....
William H. Northwall, M.D., Kearney.....
Jerald R. Schenken, M.D., Omaha.....

COMMISSION ON LEGISLATION

AND GOVERNMENTAL AFFAIRS

Ronald L. Klutzman, M.D., Chairman..... Columbus
Robert G. Osborne, M.D., Vice-Chairman..... Lincoln
Rodney S. W. Basler, M.D., Lincoln.....
Judith A. Butler, M.D., Superior.....
James H. Dunlap, M.D., Norfolk.....
Dale W. Ebers, M.D., Lincoln.....
Richard D. Fitch, M.D., O'Neill.....
Charles Gregorius, M.D., Lincoln.....
Bruce W. Henricks, M.D., Fremont.....
Barbara M. Heywood, M.D., Papillion.....
Mark R. Hutchins, M.D., Lincoln.....
Max W. Linder, M.D., Lincoln.....
Ann E. Lott, M.D., Lincoln.....
William R. Marsh, M.D., Grand Island.....
John T. McGreer, III, M.D., Lincoln.....
Dennis G. O'Leary, M.D., Omaha.....
Dwayne J. Peetz, M.D., Neligh.....
Herbert E. Reese, M.D., Lincoln.....
C. Lee Retelsdorf, M.D., Omaha.....
Blaine Y. Roffman, M.D., Omaha.....
Jerald R. Schenken, M.D., Omaha.....
Todd S. Sorensen, M.D., Scottsbluff.....
Richard B. Svehla, M.D., Omaha.....
Timothy O. Wahl, M.D., Omaha.....

AD-HOC COMMITTEE ON HEALTH POLICY STATEMENTS

C. Lee Retelsdorf, M.D., Chairman..... Omaha
Daniel S. Durrie, M.D., Omaha.....
Joel T. Johnson, M.D., Kearney.....
Darroll J. Loschen, M.D., York.....
Dale E. Michels, M.D., Lincoln.....
Stanley F. Nabity, M.D., Grand Island.....
John F. Porterfield, M.D., Lincoln.....
Gerald Rounsberg, M.D., North Platte.....
Charles S. Wilson, M.D., Lincoln.....

AD-HOC COMMITTEE ON PROFESSIONAL LIABILITY

James H. Dunlap, M.D., Chairman	Norfolk
David L. Bacon, M.D.	Kearney
Warren G. Bosley, M.D.	Grand Island
Ernest W. Chupp, M.D.	Omaha
F. M. Gawecki, M.D.	Papillion
Dwaine J. Peetz, M.D.	Neligh
Richard M. Pitsch, Jr., M.D.	Lincoln
Herbert E. Reese, M.D.	Lincoln
Blaine Y. Roffman, M.D.	Omaha

COMMISSION ON MEDICAL EDUCATION

Frederick F. Paustian, M.D., Chairman	Omaha
Robert L. Bass, M.D.	Elkhorn
Warren G. Bosley, M.D.	Grand Island
Patrick E. Brookhouser, M.D.	Omaha
Charles F. Damico, M.D.	Hastings
Charles A. Dobry, M.D.	Omaha
A. Dean Gilg, M.D.	Lincoln
William E. Lundak, M.D.	Lincoln
Richard L. O'Brien, M.D.	Omaha
Dwaine J. Peetz, Jr., M.D.	Omaha
Joseph C. Scott, M.D.	Omaha
Robert H. Waldman, M.D.	Omaha

AD-HOC COMMITTEE ON HEALTH EDUCATION & ATHLETIC MEDICINE

Warren G. Bosley, M.D., Chairman	Grand Island
Patrick E. Clare, M.D., Vice-Chairman	Lincoln
Richard W. Hammer, M.D.	Lincoln
Stephen J. Lanspa, M.D.	Omaha
Morris B. Mellion, M.D.	Omaha
Paul H. Phillips, M.D.	Scottsbluff
Richard A. Raymond, M.D.	O'Neill
Eileen C. Vautravers, M.D.	Lincoln
Hobart E. Wallace, M.D.	Lincoln
Wesley G. Wilhelm, M.D.	Omaha
Gregg F. Wright, M.D.	Lincoln

COMMISSION ON PUBLIC AFFAIRS

Rodney S. W. Basler, M.D., Chairman	Lincoln
H. Jeffrey Deeths, M.D.	Omaha
Herbert D. Feidler, M.D.	Norfolk
Edward E. Gatz, M.D.	Omaha
Donald T. Glow, M.D.	Omaha
John J. Hoelsing, M.D.	Omaha
Roger P. Massie, M.D.	Plainview
Donald E. Matthews, M.D.	Lincoln
Harlan C. Shriner, M.D.	Lincoln
F. Thomas Waring, M.D.	Fremont

COMMISSION ON HOSPITAL MEDICAL STAFF

Glen F. Lau, M.D., Chairman	Lincoln
Charles Heider, Jr., M.D.	North Platte
Harry E. Keig, M.D.	Papillion
Barney B. Rees, M.D.	Omaha
Joseph G. Rogers, M.D.	Lincoln
Larry D. Ruth, M.D.	Lincoln
Steven A. Schwid, M.D.	Omaha
Jerry K. Seiler, M.D.	Hastings
William A. Shiffermiller, M.D.	Omaha
Stephen D. Torpy, M.D.	Omaha

AD-HOC COMMITTEE ON HEALTH GALLERY

Russell L. Gorthey, M.D., Chairman	Lincoln
Warren G. Bosley, M.D.	Grand Island
Glen F. Lau, M.D.	Lincoln
Richard C. Olney, M.D.	Lincoln
John L. Reed, M.D.	Lincoln
Stanley M. Truhlsen, M.D.	Omaha

AD-HOC COMMITTEE ON YOUNG PHYSICIANS

Richard A. Raymond, M.D., Chairman	O'Neill
Gary W. Barth, M.D.	Hastings
John I. Cherry, M.D.	Lincoln
Norman Grosbach, M.D.	Omaha
Herbert A. Hartman, Jr., M.D.	Omaha
Katherine A. Keifer, M.D.	Kearney
Jeanette L. Masek, M.D.	Lincoln
Kirk B. Muffly, M.D.	Omaha
Timothy P. O'Holleran, M.D.	North Platte
Mark D. Pilley, M.D.	Omaha
Bradley D. Rodgers, M.D.	North Platte
William A. Shiffermiller, M.D.	Omaha
Vincent J. Sutton, M.D.	Hastings

NMA PRO OVERVIEW COMMITTEE

M. Jack Mathews, M.D., Chairman	Lincoln
David Bacon, M.D.	Kearney
Steven T. Bailey, M.D.	Omaha
A. H. Bergman, M.D.	Fremont
Dennis M. Connolly, M.D.	Lincoln
Carl J. Cornelius, Jr., M.D.	Sidney
Richard A. Cottingham, M.D.	McCook
Francis D. Donahue, M.D.	Omaha
Daniel S. Durrie, M.D.	Omaha
John F. Fitzgibbons, M.D.	Omaha
C. T. Frerichs, M.D.	Beatrice
Gordon J. Hrnicek, M.D.	Grand Island
Frederick F. Paustian, M.D.	Omaha
Richard A. Raymond, M.D.	O'Neill
Herbert E. Reese, M.D.	Lincoln

AD-HOC COMMITTEE RE: BLUE SHIELD OF IOWA-MEDICARE

Paul E. Collicott, M.D., Chairman	Lincoln
Steve Brase	Lincoln
Thomas M. Connors, M.D.	Omaha
Bob Gallion	Lincoln
Vernon Garwood, M.D.	Lincoln
Louis J. Goggin, Jr., M.D.	Beatrice
Roger Massie, M.D.	Plainview
Mrs. Janice Olson	Lincoln
Donald Pavelka, M.D.	Omaha
Richard B. Svehla, M.D.	Omaha
Hiram R. Walker, M.D.	Kearney

AD-HOC COMMITTEE ON MEDICAID SERVICES

Chris C. Caudill, M.D., Chairman	Lincoln
Judith A. Butler, M.D.	Superior
Dale W. Ebers, M.D.	Lincoln
Russell L. Gorthey, M.D.	Lincoln
Roger A. Jacobs, M.D.	Seward
Ronald Klutman, M.D.	Columbus
Harold M. Nordlund, M.D.	York
Richard B. Svehla, M.D.	Omaha
M. Allen Tompkins, M.D.	Grand Island
Craig L. Urbauer, M.D.	Lincoln

NEBRASKA MEDICAL ASSOCIATION

Dates to Remember

1987 Fall Session
September 10-12, 1987

120th Annual Session
April 29-May 3, 1988

ORGANIZATIONS, STATE

American Cancer Society, Nebraska Division, Inc.
Don W. McClure, Exec. Vice President
8502 West Center Rd., P.O. Box 241265, Omaha 68124-5255

American Diabetes Association - Nebraska Affiliate, Inc.
Ron Van Ryswyk, Ed.D., Executive Director
2730 South 114th St., Omaha 68144

American Heart Association, Nebraska Affiliate
Dennis N. Nissen, Executive Director
6624 Farnam St., Omaha 68131

American Lung Association of Nebraska
8301 Indian Hills Dr., Ste. 107, Omaha 68114
215 Centennial Mall South, Room 521, Lincoln 68508

American Red Cross
P.O. Box 83267
1701 E. Street, Lincoln 68501

Arthritis Foundation, Nebraska Chapter, Inc.
Ellen Wright, Exec. Director
2229 N. 91st Court, Omaha 68134

Blue Cross and Blue Shield of Nebraska
William H. Heavey, President
P.O. Box 3248, Main Station, Omaha 68180

Cerebral Palsy of Lancaster County, Inc.
Jane Holliart, Client Services Rep.
P.O. Box 80100, Lincoln 68501

Creighton University School of Medicine
Richard O'Brien, M.D., Dean
California at 24th St., Omaha 68178

Dairy Council of Central States, Inc.
2500 Main, 103 Hillcrest Landing
Ralston 68127

Division of Rehabilitation Services
Nebraska Department of Education
6th Floor, 301 Centennial Mall South, Lincoln 68509

Division of Rehabilitation Services for the Visually Impaired
James S. Nyman, Ph.D., Director
4600 Valley Road, Lincoln 68510

Easter Seal Society of Nebraska
Mrs. Letitia K. Simmons, Executive Director
3015 North 90th St., #6, Omaha 68134

Lincoln Council on Alcoholism & Drugs
914 "L" Street, Lincoln 68508

March of Dimes - Birth Defects Foundation
1618 L Street, Lincoln 68508

MID-PLAINS POISON CONTROL CENTER
Children's Memorial Hospital, 8301 Dodge St., Omaha 68114
(402) 390-3400 or 800-642-9999 (toll free Nebraska)

Midlands Chapter, National Multiple Sclerosis Society
538 Elkwood Mall/The Center
42nd & Center, Omaha 68105-2982

Missouri Valley Dermatologic Society
John R. Luckasen, M.D., Secretary
360 Doctors Bldg., N. Tower, Omaha 68131

Muscular Dystrophy Association
1912 No. 90th St., Lower Level, Omaha 68114

National Kidney Foundation of Nebraska
Karen Engelsman, Executive Director
2212 No. 91st Plaza, Omaha 68134
(402) 397-9234 - NE toll free 800-642-1255

National Society to Prevent Blindness, Nebraska Affiliate
120 North 69th St., Suite 203, Omaha 68132-2720

Nebraska Academy of Ophthalmology
Mylan VanNewkirk, M.D., President
129 West 40th, Scott-Shult 69361

Nebraska Academy of Otolaryngology
Michael Crawford, M.D., President
201 Ridge St., # 111, Council Bluffs, IA 51501

Nebraska Allergy Society
Linda B. Foril, M.D., President
401 E. Gold Coast Rd., Papillion 68128

Nebraska Association of Nuclear Physicians, Inc.
Merton A. Quade, M.D., President
Division of Nuclear Medicine, Dept. of Radiology
UNMC - 42nd & Dewey, Omaha 68105

Nebraska Association of Pathologists
Joseph Rapoport, M.D., President
6901 No. 72nd St., Omaha 68122

Nebraska Chapter - American Academy of Family Physicians
Paul M. Paulman, M.D., Secretary-Treasurer
Phyllis G. Hansen, Executive Director
River City Office Park, #202, 401 No. 117th, Omaha 68134

Nebraska Chapter - American Academy of Physician Assistants
Joe E. Jeter, PA C, President
P.O. Box 397, North Bend 68649

Nebraska Chapter - American Academy of Pediatrics
H. J. Kuehn, M.D., Chairman
8300 Dodge St., #219, Omaha 68114

Nebraska Chapter - American College of Emergency Physicians
Richard L. Keller, M.D., President
9641 No. 29th, Omaha 68112

Nebraska Chapter - American College of Surgeons
Louis J. Gogela, M.D., Past President
2221 South 17th St., Lincoln 68502

Nebraska Chapter - American College of Physicians
Frederick F. Paustian, M.D., F.A.C.P., Governor
UNMC - 42nd & Dewey Ave., Omaha 68105

Nebraska Chapter of Myasthenia Gravis Foundation
John F. Ata, M.D., Medical Advisor
105 So. 49th St., Omaha 68132

Nebraska Cystic Fibrosis Association
Charles R. Bercaw, Executive Director
P.O. Box 31235, Omaha 68131

Nebraska Dental Association
Barry Ross, Executive Director
3120 O St., Lincoln 68510

Nebraska Dietetic Association
Linda O. Young, M.S., R.D., President
University of NE - 214 Rob. LeVerton Hall, Lincoln 68583-0806

Nebraska Health Care Association
Patricia Snyder, Executive Director
3100 O St., Ste. 7, Lincoln 68510

Nebraska Hospital Association
Harlan Heald, President
Box 94833, 1335 L St., Lincoln 68509

Nebraska League for Nursing
Priscilla Allen, R.N., President
3800 N. 6th, #5, Beatrice 68310

Nebraska Medical Association
William L. Schellpeper, Executive Director
1512 FirstTier Bank Bldg., Lincoln 68508

Nebraska Medical Foundation
William L. Schellpeper, Secretary
1512 FirstTier Bank Bldg., Lincoln 68508

Nebraska Nurses Association
Mary Ann Sak, Executive Director
Suite 711, Terminal Bldg., Lincoln 68508

Nebraska Orthopaedic Society
Ronald Schwab, M.D., Secretary
2300 South 13th St., Lincoln 68502

Nebraska Perinatal Organization
Sheila Ecklund, R.N.
St. Elizabeth Community Health Center, 555 So. 70th, Lincoln 68510

Nebraska Pharmacists Association
Tom R. Dolan, R.P., Executive Director
600 So. 12th, Lincoln 68508

Nebraska Psychiatric Society, District Branch of the American Psychiatric Association
Jehangir B. Bastani, M.D., President
8110 Myrtle, Lincoln 68506

Nebraska Public Health Association
President, N.P.H.A.
P.O. Box 94813, Lincoln 68509

Nebraska Radiological Society
Terrance R. Rusthoven, M.D., President
2112 Fattley, Grand Island 68801

Nebraska Rheumatism Association
Arthur L. Weaver, M.D., President
2121 So. 56th St., Lincoln 68506

Nebraska Section, American College of Obstetricians & Gynecologists
Larry E. Rollman, M.D.
800 Doctors Bldg., Omaha 68131

Nebraska Society of Anesthesiologists
K. Reed Peters, M.D., President
1512 FirstTier Bank Bldg., Lincoln 68508

Nebraska Society of Internal Medicine
Vernon F. Garwood, M.D., President
120 Wedgewood Ave., Suite A, Lincoln 68510

Nebraska Society of Medical Assistants, Inc., an Affiliate of the American Association of Medical Assistants
Patty Hale, CMA, President
Box 184, Sutherland 69165

Nebraska Society for Respiratory Therapy
Charlotte Pascoe, R.R.T., President
Southeast Community College, Lincoln 68505

Nebraska State Department of Health
Gregg Wright, M.D., Director of Health
301 Centennial Mall South P.O. Box 95007, Lincoln 68509

Nebraska State Obstetric and Gynecology Society
Dennis D. Beavers, M.D., Secretary-Treasurer
720 N. 87th St., Omaha 68114

Nebraska Stroke Foundation
Karyl Newman, President
P.O. Box 67004, Lincoln 68506

Nebraska Urological Association
Alan H. Domina, M.D., President
4740 A Street, Lincoln 68510

Nebraska Veterinary Medical Association
Don Ellerbee, Executive Director
209 West 9th St., Hastings 68401

Omaha Mid-West Clinical Society
Ms. Lorraine E. Seibel, Executive Secretary
7363 Pacific St., #205-B, Omaha 68114

Physician Referral Program, Nebraska Department of Health
3rd Floor, State Office Building, 301 Centennial Mall So., Lincoln 68509

University of Nebraska Medical Center
Charles E. Andrews, M.D., Chancellor
42nd & Dewey, Omaha 68105

AMA News Notes

(continued from page 19A)

critical approach to reports of unproven health practices," the authors say. "Quackery thrives because people want to believe there are simple cures for their ills and easy ways to perfect their imperfections."

For physicians and others interested in fighting fraudulent or pseudoscientific health practices, the 31-page booklet lists the most common unproven treatments and how they are perpetrated on the unwary, tells how to counsel victims of health care fraud, and lays out a strategy for reporting fraudulent practitioners to health and law enforcement officials. A special feature of the booklet tells how to avoid legal problems, such as slander or libel suits by fraudulent health care practitioners.

The booklet specifically addresses itself to health professionals in California. But the information is useful for anyone interested in combatting quackery. Both federal and national voluntary agencies are listed, as well as a bibliography for further reading. The booklet sells for \$7.50 per copy.

For more information, contact Jill Tyler, CMA, 44 Gough St., San Francisco, Calif. 94120, (415) 863-5522.



Drug/Alcohol/Emotional/Other Health Problems

HELP IS AVAILABLE
FOR YOU

FOR A MEMBER OF YOUR FAMILY
FOR A PROFESSIONAL, FRIEND OR
COLLEAGUE

Call
The Physician's Advocacy Committee
(Nebraska Medical Association)
Strictly Confidential — Professional — Effective

For information call:

402-393-3216

(You do not have to give your name.)



OMAHA MID-WEST CLINICAL SOCIETY

55th ANNUAL POSTGRADUATE ASSEMBLY

OCTOBER 26, 27, 28, 1987

RED LION INN
Omaha, Nebraska

For Information Contact:

Lorraine Seibel
Omaha Mid-west Clinical Society
7363 Pacific Street, Suite 205-B
Omaha, Nebraska 68114
(402) 397-1443

ADVERTISER'S INDEX

A	
Auto-Med, Inc.....	13
Ayerst Laboratories.....	9, 10, 11, 12
C	
Campbell Laboratories, Inc.....	8
Creighton University Medical Center.....	14
D	
Donley Medical Supply.....	6
F	
Family Practice Recertification.....	19
G	
Glaxo/Roche	16, 17, 18
I	
Info-Builders, Inc.....	19
L	
Eli Lilly & Co.....	4
M	
Medical Protective Co.	7
N	
Naval Reserve Readiness Command	14
Norfolk Printing Co., Inc.....	6
O	
Omaha Midwest Clinical Society.....	23
R	
Roche Laboratories.....	25, 26
S	
Smith Kline & French Labs	15
U	
Upjohn Company	3
W	
Wagner Community Memorial Hospital.....	7

Physicians' Classified

Advertisements in this column are run at the rate of \$15.00 per insertion, for an advertisement of 50 words or less. An additional charge of 25¢ per word will be assessed for advertisements exceeding the 50-word limit. Copy must be received by the fifth of the month preceding the date of publication. Each advertisement will be removed following its first appearance unless otherwise instructed. If desired, advertisers may utilize a box number in care of THE NEBRASKA MEDICAL JOURNAL, 1512 FirstTier Bank Bldg., Lincoln, NE 68508.

EMERGENCY MEDICINE: In Omaha NE — Full and Part-time positions available in an emergency department for qualified physician seeking lucrative employment opportunities. Outstanding remuneration and comprehensive malpractice insurance provided. For further information contact: Deborah Bergun, Staffing Specialist, National Emergency Services, Inc., 255 Executive Dr., Suite 104, Plainview, NY 11803 or call 1-800-645-4848 or 516-349-0100.

FAMILY PRACTICE PHYSICIAN NEEDED: Established need for a family practice physician to join seven man group in beautiful Northwest Iowa. Modern 10,000 sq. ft. clinic building is next door to 72-bed JCAH accredited county hospital. Unusually progressive community of 10,000 has economy far above the state average. Storm Lake offers 3,000 acre lake, 85 acres of park and recreation, and is home to Buena Vista College. One hour from Sioux City, and two hours from Omaha & Des Moines. Generous guarantee with immediate incentive plan, paid malpractice insurance, liberal vacation and seminar time, limited call requirements with seven other physicians and no HMO's in the area. Contact Darrell Pritchard, Manager, Buena Vista Clinic, P.C., 620 Northwestern Drive, Storm Lake, IA 50588. Call collect 712-732-5030.

UROLOGIST: VA Medical Center, Lincoln, Nebraska. Seeking board certified or board eligible urologist for progressive, affiliated 180-bed Medical Center. Center is affiliated with University of Nebraska for urology residency program. Salary and bonus pay commensurate with training and experience. Licensure any state. Must meet English proficiency requirement. Allowable moving expenses payable. Equal Opportunity Employer. Write or call: 402-489-3802, Ext. 229, Chief, Surgical Service, VA Medical Center, 600 South 70th St., Lincoln, NE 68510.

MINNEAPOLIS: Seeks BC/BE associates in adult psychiatry, cardiology, family practice, internal medicine, and obstetrics and gynecology. Practice quality medicine in a prepaid multispecialty setting located in one of America's leading metropolitan areas. Comprehensive benefits, excellent facilities, flexible compensation programs. For further information about joining the GROUP HEALTH medical staff, call Jerry Hess at 612-623-8444 or write to Group Health, Inc., Attention: Jerry Hess, 2829 University Avenue S.E., Minneapolis, MN 55414.

FAMILY PRACTICE AND INTERNAL MEDICINE: Huron Clinic Foundation, Limited is a multispecialty group serving a trade area of approximately 50,000, has a practice situation

where several members of the staff are near retirement and a ready practice would be available. A new member can start with NO CASH investment, first year salary guarantee, and receive a large number of benefits including malpractice insurance and a pension plan. The Clinic is located next to a 120 bed JCAH accredited regional hospital with excellent diagnostic and care capabilities. The Clinic is currently pressed for a Board Certified/Board Eligible physician to take over a practice. Call collect (605) 352-8691 or contact any staff member or the clinic manager at the Huron Clinic, P.O. Box 822, Huron, South Dakota 57350.

PRACTICE OPPORTUNITY: Family physician needed to staff urgent care center in urban Nebraska community, 40 to 50 hours per week, no call, no OB, send CV to Box 029, **Nebraska Medical Journal**, 1512 FirstTier Bank Bldg., Lincoln, NE 68508.

OPPORTUNITY: SEEKING ABFP-CERTIFIED FAMILY PHYSICIAN: Position available immediately to replace retiring third partner in pleasant family practice clinic. Full range of family practice. Clinic next to 40-bed acute care hospital. Rotating call schedule with time for education and vacations. ACS-certified general surgeons in town. Supportive 2200 population community. Rural farm/ranch area. Hunting, fishing and good flying weather. Salary first year with opportunity to buy in if mutually agreeable. M. K. Stockwell, M.D., Gordon Clinic, P.C., 807 N. Ash, Gordon, Nebraska 69343, Office: (308) 282-1442, Home: (308) 282-2292.

FAMILY PRACTITIONER: Mobridge Medical Clinic is seeking a family practitioner to join a well-established group practice consisting of two family practitioners, one general surgeon and one internist. Mobridge is located in a rural area which excellent hunting, fishing, and outdoor recreational opportunities. The area is served by Mobridge Regional Hospital, a well-equipped, 52-bed facility which serves a community of 30,000 people. Excellent salary plus fringe benefits. Please send curriculum vitae to Dale Myren, Administrator, Mobridge Medical Clinic, P.O. Box 520, 414 West First Avenue, Mobridge, South Dakota 57601 or phone collect 605-845-2962.

WANTED: Internal Medicine, Board Certified or Eligible to join medical section at Grand Island, Nebraska VAMC. Send CV to Chief of Staff, Grand Island VAMC, 2201 N. Broadwell, Grand Island, NE 68803.

YOUR OWN FAMILY PRACTICE: Salary guarantees, financial and other incentive offered. One physician practicing, seeking second, possibly third physician to own and operate clinic. Modern, well-equipped, financially sound, 20-bed hospital with attached clinic and ICF facility. Excellent E.M.T. rescue unit. Strong market area with tremendous potential. Ambitious, supportive community proud of its medical services. Recreation includes golf, tennis, racquetball, fishing, hunting, water skiing, movie theatre, supper club, civic organizations. North Central Accredited public school system. Fine family community. Contact Mike Shafer, Administrator, Fritzer Memorial Hospital, P.O. Box 218, Oxford, NE 68967, phone (308) 824-3271.

In acute and chronic edema due to CHF

FOR PREDICTABLE CONTROL

- **Less potassium loss for a given amount of sodium excretion than with furosemide¹⁻³**
- **Predictable dose response⁴**
- **Diuresis completed hours faster than with furosemide after oral dosing⁵**
- **Better GI absorption^{6,7}**
- **Early evening dosing helps prevent nocturnal dyspnea**

As with all loop diuretics, excessive doses of BUMEX can lead to profound diuresis with water and electrolyte depletion, including hypokalemia, so serum electrolytes should be monitored.



Bumex[®]

bumetanide/Roche

0.5-mg, 1-mg and 2-mg scored tablets; 2-ml ampuls and 2-ml, 4-ml and 10-ml vials (0.25 mg/ml)

References: 1. Flamenbaum W. *Am J Cardiol* 57(2):38A-43A, 1986. 2. Brater DC, Fox WR, Chennavasin P. *J Clin Pharmacol* 21:599-603, 1981. 3. Iber FL, Baum RA. *J Clin Pharmacol* 21:697-700, 1981. 4. Henning R, Lundvall O. *Eur J Clin Pharmacol* 6:224-227, 1973. 5. Physicians' Desk Reference, 40th ed. Oradell, NJ, Medical Economics Company, 1986, pp. 939, 1480. 6. Pentikainen PJ, et al. *Br J Clin Pharmacol* 4:39-44, 1977. 7. *Losix, A Review*. Somerville, NJ, Hoechst-Roussel Pharmaceuticals, Inc., 1980.

BUMEX[®]
(bumetanide/Roche)
0.5-mg, 1-mg and 2-mg scored tablets
2-ml ampuls, 2-ml, 4-ml and
10-ml vials (0.25 mg/ml)

Before prescribing, please consult complete product information, a summary of which follows:

WARNING: Bumex (bumetanide/Roche) is a potent diuretic which, if given in excessive amounts, can lead to a profound diuresis with water and electrolyte depletion. Therefore, careful medical supervision is required, and dose and dosage schedule have to be adjusted to the individual patient's needs. (See under DOSAGE AND ADMINISTRATION in complete product information.)

INDICATIONS AND USAGE: Edema associated with congestive heart failure, hepatic and renal disease, including the nephrotic syndrome.

Almost equal diuretic response occurs after oral and parenteral administration of Bumex. If impaired gastrointestinal absorption is suspected or oral administration is not practical, Bumex should be given by the intramuscular or intravenous route.

Successful treatment with Bumex following instances of allergic reactions to furosemide suggests a lack of cross-sensitivity.

CONTRAINDICATIONS: Anuria. Hypersensitivity and in patients in hepatic coma or in states of severe electrolyte depletion. Although Bumex can be used to induce diuresis in renal insufficiency, any marked increase in blood urea nitrogen or creatinine, or the development of oliguria during therapy of patients with progressive renal disease, is an indication for discontinuation of treatment.

WARNINGS: Dose should be adjusted to patient's needs. Excessive doses or too frequent administration can lead to profound water loss, electrolyte depletion, dehydration, reduction in blood volume and circulatory collapse with the possibility of vascular thrombosis and embolism, particularly in elderly patients.

Prevention of hypokalemia requires particular attention in patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis and ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, certain diarrheal states, or other states where hypokalemia is thought to represent particular added risk to the patients.

In patients with hepatic cirrhosis and ascites, sudden alterations of electrolyte balance may precipitate hepatic encephalopathy and coma. Treatment in such patients is best initiated in the hospital with small doses and careful monitoring of the patient's clinical status and electrolyte balance. Supplemental potassium and/or spironolactone may prevent hypokalemia and metabolic alkalosis in these patients. In cats, dogs and guinea pigs, Bumex has been shown to produce ataxia. Since Bumex is about 40 to 60 times as potent as furosemide, if it is anticipated that blood levels necessary to produce ataxia will rarely be achieved. The potential for ataxia increases with intravenous therapy, especially at high doses.

Patients allergic to sulfonamides may show hypersensitivity to Bumex.

PRECAUTIONS: Measure serum potassium periodically and add potassium supplements or potassium-sparing diuretics, if necessary. Periodic determinations of other electrolytes are advised in patients treated with high doses or for prolonged periods, particularly in those on low salt diets.

Hyperurcemia may occur. Reversible elevations of the BUN and creatinine may occur, especially with dehydration and in patients with renal insufficiency. Bumex may increase urinary calcium excretion. Possibility of effect on glucose metabolism exists. Periodic determinations of blood sugar should be done, particularly in patients with diabetes or suspected latent diabetes. Patients should be observed regularly for possible occurrence of blood dyscrasias, liver damage or idiosyncratic reactions.

Especially in presence of impaired renal function, use of parenterally administered Bumex should be avoided in patients to whom aminoglycoside antibiotics are also being given, except in life-threatening conditions.

Drugs with nephrotoxic potential and bumetanide should not be administered simultaneously. Since lithium reduces renal clearance and adds a high risk of lithium toxicity, it should not be given with diuretics.

Probenecid should not be administered concurrently with Bumex.

Concurrent therapy with indomethacin not recommended.

Bumex may potentiate the effects of antihypertensive drugs, necessitating reduction in dosage.

Interaction studies in humans have shown no effect on digoxin blood levels.

Interaction studies in humans have shown Bumex to have no effect on warfarin metabolism or on plasma prothrombin activity.

Pregnancy: Bumex should be given to a pregnant woman only if the potential benefit justifies the potential risk to the fetus.

Bumetanide may be excreted in breast milk.

Pediatric Use: Safety and effectiveness below age 18 not established.

ADVERSE REACTIONS: Muscle cramps, dizziness, hypotension, headache and nausea, and encephalopathy (in patients with preexisting liver disease).

Less frequent clinical adverse reactions are weakness, impaired hearing, rash, pruritus, hives, electrocardiogram changes, abdominal pain, arthritic pain, musculoskeletal pain and vomiting. Other clinical adverse reactions are vertigo, chest pain, ear discomfort, fatigue, dehydration, sweating, hyperventilation, dry mouth, upset stomach, renal failure, asterixis, itching, nipple tenderness, diarrhea, premature ejaculation and difficulty maintaining an erection.

Laboratory abnormalities reported are hyperurcemia, azotemia, hyperglycemia, increased serum creatinine, hypochloremia, hypokalemia, hyponatremia, and variations in CO₂ content, bicarbonate, phosphorus and calcium. Although manifestations of the pharmacologic action of Bumex, these conditions may become more pronounced by intensive therapy. Diuresis induced by Bumex may also rarely be accompanied by changes in LDH, total serum bilirubin, serum proteins, SGOT, SGPT, alkaline phosphatase, cholesterol, creatinine clearance, deviations in hemoglobin, prothrombin time, hematocrit, platelet counts and differential counts. Increases in urinary glucose and urinary protein have also been seen.

DOSAGE AND ADMINISTRATION:

Oral Administration: The usual total daily dosage is 0.5 to 2.0 mg and in most patients is given as a single dose.

Parenteral Administration: Administer to patients (IV or IM) with GI absorption problem or who cannot take oral. The usual initial dose is 0.5 to 1 mg given over 1 to 2 minutes. If insufficient response, a second or third dose may be given at 2 to 3 hour intervals up to a maximum of 10 mg a day.

HOW SUPPLIED: Tablets, 0.5 mg (light green), 1 mg (yellow) and 2 mg (peach), bottles of 100 and 500, Prescription Packs of 30, Tel-E-Dose[®] cartons of 100. Imprint on tablets: 0.5 mg—ROCHE BUMEX 1, 2 mg—ROCHE BUMEX 2.

Ampuls, 2 ml, 0.25 mg/ml, boxes of ten.

Vials, 2 ml, 4 ml and 10 ml, 0.25 mg/ml, boxes of ten.

P 1 0905

Roche Laboratories

a division of Hoffmann-La Roche Inc.

Nutley, New Jersey 07110





LIBRARY
AUG 13 1987
N. J. ACADEMY
OF MEDICINE

In acute and chronic edema due to CHF

A DIURETIC THAT GIVES YOU PREDICTABLE CONTROL

Bumex[®]
bumetanide/Roche

0.5-mg, 1-mg and 2-mg scored tablets, 2-ml ampuls
and 2-ml, 4-ml and 10-ml vials (0.25 mg/ml)

Please see adjacent page for references and summary of product information.
Copyright © 1987 by Hoffmann-La Roche Inc. All rights reserved.

THE NEBRASKA MEDICAL JOURNAL



119
Years



Contents

Editorial

- Why Are You in My Room? **301**
Edward A. Holyoke

Original Articles

- Artificial Tanning **303**
Rodney S. W. Basler, M.D.

- Experience with Hydatid Disease
in Saudi Arabia **306**
Zdenek A. Tusek, M.D.

- Cranial CT Atrophy in Multiple
Sclerosis - An Aid to Diagnosis **310**
John F. Aita, M.D.

- Cranial CT Characteristics of
Low-Density Multiple Sclerosis
Regions of Sclerosis **315**
John F. Aita, M.D.

- Wordy Surgery
Harry Perelman, M.D., F.A.C.S.

Features

- President's Page **319**

- The Auxiliary **321**

- AMA News **322**

- Coming Meetings **324**

Now Available

The Health Policy Agenda for the American People

A Comprehensive Framework for the Future

After five years of collaborative effort, The Health Policy Agenda for the American People (HPA) has issued its Summary and Final Reports recommending policy guidelines for the future of our health care system. This landmark effort establishes a comprehensive, long-term framework for U.S. health policy into the 21st century.

Broad Reaching Recommendations

The HPA Reports contain guiding principles and specific policy recommendations covering a wide subject area:

- supplying, distributing and educating health professionals
- providing technology and facilities
- organizing resources
- communicating health information
- ensuring quality
- paying for services
- preparing for the future through research

A Health Policy Partnership

Representatives of the health professions, insurers, health care institutions, consumer organizations, business groups and the government collaborated to develop recommendations that reflect this broad array of viewpoints. Learn what the HPA has recommended on your behalf... and how it will affect your future.

Order Now

To order your copies of the HPA Summary and Final Reports **call toll-free 1-800-621-8335. In Illinois call collect 312/645-4987.** Or complete and mail the form below with your payment to:
The Health Policy Agenda for the American People
P.O. Box 10946
Chicago, Illinois 60610-0946
Order No. OP-207

Order Form

Please send me _____ copies of the HPA Summary and Final Reports (OP-207) at \$35 for the two volume set.

Subtotal _____
Sales tax (IL, NY residents) _____
Total _____

Name

Address

City

State/Zip

Please charge my: ☐ VISA ☐ MASTERCARD

Credit Card Number

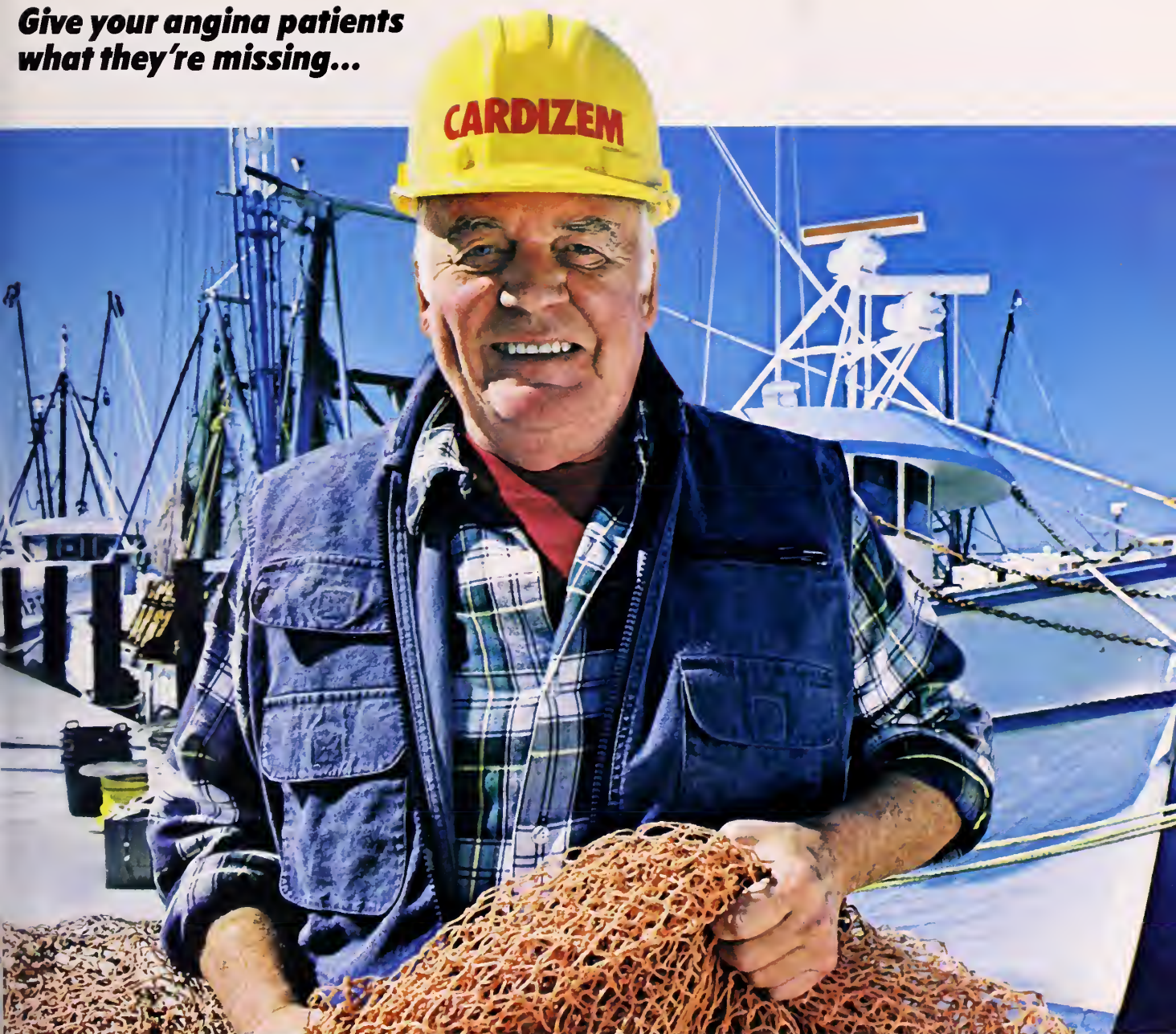
Expiration Date

Signature

Phone

Payment must accompany order. Please allow 4-6 weeks for delivery.
For information on bulk purchases, please call 312/280-7168.

**Give your angina patients
what they're missing...**



CARDIZEM:[®] FEW SIDE EFFECTS

diltiazem HCl/Marion

- **Antianginal action includes dilatation of coronary arteries, a decrease in vascular resistance/afterload, and a reduction in heart rate**
- **Proven efficacy when used alone in angina¹**
- **Compatible with other antianginals^{2,3*}**
- **A safe choice for angina patients with coexisting hypertension, asthma, COPD, or PVD^{4,5}**

***See Warnings and Precautions.**

Please see brief summary of prescribing information on the next page.

90 mg
NEW 120 mg
**GREATER
DOSAGE
FLEXIBILITY**



CARDIZEM[®] FEW SIDE EFFECTS diltiazem HCl/Marion IN ANTIANGINAL THERAPY

60 mg tid or qid

Brief Summary Professional Use Information

CARDIZEM[®]
(diltiazem HCl)
30 mg, 60 mg, 90 mg, and 120 mg Tablets

CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

- Cardiac Conduction.** CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.
- Congestive Heart Failure.** Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt). Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
- Hypotension.** Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.
- Acute Hepatic Injury.** In rare instances, significant elevations in enzymes such as alkaline phosphatase, CPK, LDH, SGOT, SGPT, and other symptoms consistent with acute hepatic injury have been noted. These reactions have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in most cases, but probable in some. (See PRECAUTIONS.)

PRECAUTIONS

General. CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic

function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.

Drug Interaction. Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in *in vitro* bacterial tests. No intrinsic effect on fertility was observed in rats.

Pregnancy. Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably asso-

ciated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%):

Cardiovascular:	Angina, arrhythmia, AV block (first degree), AV block (second or third degree — see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope.
Nervous System:	Amnesia, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor.
Gastrointestinal:	Anorexia, constipation, diarrhea, dysgeusia, dyspepsia, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase.
Dermatologic:	Petechiae, pruritus, photosensitivity, urticaria.
Other:	Amblyopia, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarticular pain, polyuria, sexual difficulties.

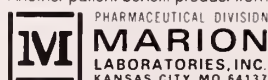
The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.

Issued 9/86

See complete Professional Use Information before prescribing

References: 1. Pepine CJ, Feldman RL, Hill JA, et al: Clinical outcome after treatment of rest angina with calcium blockers: Comparative experience during the initial year of therapy with diltiazem, nifedipine, and verapamil. *Am Heart J* 1983; 106(6): 1341-1347. 2. Shapira W: Calcium channel blockers: Actions on the heart and uses in ischemic heart disease. *Consultant* 1984; 24(Dec): 150-159. 3. Johnston DL, Lesoway R, Humen DP, et al: Clinical and hemodynamic evaluation of propranolol in combination with verapamil, nifedipine and diltiazem in exertional angina pectoris: A placebo-controlled, double-blind, randomized, crossover study. *Am J Cardiol* 1985; 55: 680-687. 4. Cohn PF, Braunwald E: Chronic ischemic heart disease. In Braunwald E (ed): *Heart Disease: A Textbook of Cardiovascular Medicine*, ed 2 Philadelphia, WB Saunders Co, 1984, chap 39. 5. Schroeder JS: Calcium and beta blockers in ischemic heart disease. When to use which. *Mod Med* 1982; 50(Sept): 94-116.

Another patient benefit product from



The Nebraska Medical Journal

VOL. 72, NO. 9

SEPTEMBER 1987

EDITOR —

ALAN D. FORKER, M.D.
5505 Ellendale Road,
Lincoln, NE 68510

Associate Editors:

Deepak M. Gangahar, M.D., Lincoln
Charles S. Wilson, M.D., Lincoln

Editorial Board:

James O. Armitage, M.D., Omaha
Rodney S.W. Basler, M.D., Lincoln
Jehangir B. Bastani, M.D., Lincoln
John H. Casey, M.D., Lincoln
Paul E. Collicott, M.D., Lincoln
John F. Connolly, M.D., Omaha
Douglass Decker, Jr., M.D., Lincoln
Robert W. Gillespie, M.D., Lincoln
Stephen R. Grenier, M.D., Lincoln
Bruce D. Gutnik, M.D., Omaha
Roger Harned, M.D., Omaha
Edward A. Holyoke, Jr., M.D., Ogallala
Sushil S. Lacy, M.D., Lincoln
Hal K. Mardis, M.D., Omaha
Gilles R. G. Monif, M.D., Omaha
Walter J. O'Donohue, M.D. Omaha
William F. Rayburn, M.D., Omaha
John L. Reed, M.D., Lincoln
Jerald R. Schenken, M.D., Omaha
Kenton L. Shaffer, M.D., Kearney
Harlan C. Shriner, Jr., M.D., Lincoln
Patricia Cole Stivins, M.D., Lincoln
Harold W. Thaut, M.D., Beatrice
Jon S. Thompson, M.D., Omaha
William L. Vosik, M.D., Kearney
Arthur Weaver, M.D., Lincoln



SUBSCRIPTION RATE

\$18.00 Per Year U.S.
\$18.00 Per Year Foreign Country
Single Copies \$1.50 Each

Copyright© 1987 Nebraska Medical Association. Information concerning reprints of the articles in this Journal and concerning obtaining permission for the reproduction of any portion of this Journal may be obtained from the Editor.

The Nebraska Medical Journal does not assume responsibility for statements made or opinions expressed by the authors. Products and services advertised are neither endorsed nor warrantied by the Nebraska Medical Association. The Nebraska Medical Journal reserves the right to accept or reject advertising copy.

Published monthly and Second-Class Postage paid at Lincoln, Nebraska and at additional mailing offices (ISSN 0091-6730)

Address all correspondence relating to subscriptions, advertising or address changes to William L. Schellpeper, Business Manager, 1512 First Tier Bank Building, Lincoln, Nebraska 68508. Phone (402) 474-4472.

EDITORIAL —

- Why Are You In My Room?**301
Edward A. Holyoke

ORIGINAL ARTICLES —

- Artificial Tanning**303
Rodney S. W. Basler, M.D.
- Experience with Hydatid Disease in Saudi Arabia**306
Zdenek A. Tusek, M.D.
- Cranial CT Atrophy in Multiple Sclerosis -
An Aid to Diagnosis**310
John F. Aita, M.D.
- Cranial CT Characteristics of Low-Density
Multiple Sclerosis Regions of Sclerosis**315
John F. Aita, M.D.
- Wordy Surgery**317
Harry Perelman, M.D., F.A.C.S.

FEATURES —

- President's Page**319
- The Auxiliary**321
- American Medical Association News**322
- Coming Meetings**324

Since 1925

Nebraska's Leading Physicians and Surgical Supply House

Phone 474-3222



**DONLEY MEDICAL
SUPPLY COMPANY**

P.O. Box 83108, Lincoln, NE 68501
AUTHORIZED CONTRACT AGENT

REPRINTS

OF YOUR

Technical Articles

Are a direct presentation of research
and a valuable supplement
to any doctor's library.



It costs very little
to run reprints —
write us for prices

Norfolk Printing Co., Inc.

118 North Fifth
NORFOLK, NEBRASKA 68701

Letterheads - Statements

Envelopes - Office Forms

Quality Printing at the Right Price

ADVICE TO AUTHORS

Manuscripts should be submitted in duplicate to the Editor at the following address: Alan D. Forker, M.D., 5505 Ellendale Road, Lincoln, Nebraska 68510. The manuscript should be typewritten, double-spaced, on 8½ x 11 in. paper, with generous margins on each page. Number all pages in the right upper corner with the author's surname.

Review articles will be considered, and should generally be limited to less than 4,000 words and approximately 30 references.

Manuscripts describing original clinical or laboratory research should be limited to 2,000 words and approximately 20 references.

Acknowledgements must be given when material from other publications is included. Provide names of authors, title of article, title of journal or book, volume number, pages, month and year, and publisher's permission to reprint.

Always send a covering letter or letter of transmittal with each manuscript, and refer to the manuscript by its title, in the letter and all correspondence. Do not send a manuscript that was published elsewhere.

Title page: each manuscript should have a title page, including the full name, academic degree, and hospital or university affiliation of each author. A name and address for reprint requests should be included on the title page, including street address, city, state, and zip code.

Summary for article: all major scientific articles should be accompanied by a summary at the end of the article, summarizing the key information and recommendations presented.

References: should be listed in the order in which they appear in the article and should be typed double-spaced. Authors are responsible for the completeness and accuracy of all cited references. Journal references should include authors' names and initials, title of article, abbreviated name of Journal (as listed in Index Medicus), volume number, inclusive pages, and year of publication. References to books should include authors, title, location and name of publisher, year of publication, edition, and page numbers.

Tables and illustrations: should be typed double-spaced on separate sheets of 8½ x 11 in. paper. Each Table should have a title. Illustrations should be prepared professionally and submitted as high-quality, glossy, unmounted black-and-white photographic prints, at least 5 x 7 in. Do not send original artwork. Each illustration should be consecutively numbered and cited in the text. Each photograph should have a gummed label on the back containing the figure number, name of senior author and an arrow indicating top of figure. Legends should be typed double-spaced for each illustration. Permission to reproduce a picture of a patient is needed, if such a picture is included.

Letters-to-the-Editor: letters are encouraged by all readers and will be published as space permits and at the discretion of the Editor. All letters should be accompanied by the notation: For publication. Galley proofs generally will not be returned to the authors pre-publication.

Manuscripts will be published in the order in which they are received, particularly in the order in which galley proofs are returned from the authors. The Editor of this Journal assumes no responsibility for opinions and claims expressed in an article published in this Journal.

Reprints should be ordered from the printer, Norfolk Printing Company, Inc., P.O. Box 278, Norfolk, Nebraska 68701.

To show you how many
hypertensives stayed on

INDERAL[®] LA
(PROPRANOLOL HCl)

after a major nationwide trial...



An aerial photograph of a large, modern stadium at dusk. The stadium is filled with spectators, and the football pitch is brightly lit. The stadium's architecture features a white, curved facade and a large, illuminated roof. In the foreground, there are several circular structures, possibly part of the stadium's infrastructure or surrounding city. The background shows a cityscape with houses and a river, all under a twilight sky.

...we had
to find
just the
right room.

60,073 patients (90%) who started on INDERAL LA stayed on INDERAL LA.^{1*}

Surprising? Not really.

Because most patients on INDERAL LA (propranolol HCl) don't even know it's working.

A recent double-blind, placebo-controlled, crossover study in 138 hypertensive patients² revealed that INDERAL LA has a side effects profile unsurpassed by atenolol or metoprolol — which shows how well-tolerated once-daily INDERAL LA can be.

Sole therapy or concomitant therapy?

Fifty-nine percent of the time, INDERAL LA stood on its own.

The patients in the nationwide compliance trial were no different from yours. Generally when the antihypertensive regimen is complicated, compliance may become a problem. So, the effectiveness of INDERAL LA as once-daily monotherapy is a big plus. Of the remaining hypertensives in the program, 36% were treated merely with the addition of a diuretic to INDERAL LA.

For the noncompliant patients in your practice, INDERAL LA may well be the answer.

Almost 20,000 of the patients in the nationwide compliance trial were identified as having been noncompliant with their previous antihypertensive therapy. Their physicians reported that 88% showed improved compliance when placed on once-daily INDERAL LA.

Control, comfort, and compliance

ONCE-DAILY
INDERAL[®] LA
(PROPRANOLOL HCl) LONG ACTING CAPSULES

Like conventional INDERAL Tablets, INDERAL LA should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree, and bronchial asthma.

*After a 30-day trial with INDERAL LA, physicians reported that 90% of the patients would remain on INDERAL LA.

**The one you know best
keeps looking better**

Please see next page for brief summary of prescribing information

NEW LOW DOSE
INDERAL[®] LA 60 mg
(PROPRANOLOL HCl) LONG ACTING CAPSULES

The one you know best keeps looking better

BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION SEE PACKAGE CIRCULAR)

INDERAL® LA brand of propranolol hydrochloride (**Long Acting Capsules**)

DESCRIPTION. INDERAL LA is formulated to provide a sustained release of propranolol hydrochloride. INDERAL LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL, as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension. It may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first-degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE. Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema) — PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY. The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOLYCEMIA. Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS. Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T_4 and reverse T_3 and decreasing T_3 .

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case, this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL. Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should

be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS. Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS. Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncope attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenyltoin, phenobarbital, and rifampin accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

Antipyrine and lidocaine have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T_3 concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY. Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY. Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS. INDERAL is excreted in human milk. Caution should be exercised when INDERAL (propranolol HCl) is administered to a nursing woman.

PEDIATRIC USE. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular. Bradycardia, congestive heart failure, intensification of AV block, hypotension; paresthesia of hands, thrombocytopenic purpura, arterial insufficiency, usually of the Raynaud type.

Central Nervous System. Light-headedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances, hallucinations, vivid dreams, an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy and vivid dreams appear dose related.

Gastrointestinal. Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic. Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory. Bronchospasm.

Hematologic. Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune. In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous. Alopecia, LE-like reactions, psoriasisiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg-for-mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION — Dosage must be individualized. The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood-pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS — Dosage must be individualized. Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE — Dosage must be individualized. The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS — 80-160 mg INDERAL LA once daily. **PEDIATRIC DOSAGE —** At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

REFERENCES:

1. INDERAL LA National Compliance Evaluation Program. Data on file, Ayerst Laboratories.
2. Ravid M, Lang R, Jutrin I. The relative antihypertensive potency of propranolol, oxprenolol, atenolol, and metoprolol given once daily. *Arch Intern Med* 1985; 145:1321-1323.

1R719 887

Ayerst

AYERST LABORATORIES
New York, NY 10017

© 1987 Ayerst Laboratories

ONCE-DAILY

INDERAL® LA
(PROPRANOLOL HCl)

LONG ACTING CAPSULES

60 mg 80 mg 120 mg 160 mg



*

A SPECIAL PRACTICE FOR SPECIALISTS.



If you're a **Surgeon or OB/GYN or Other Medical Specialist**, the Air Force may have a special practice for you. What makes it special? You'll enjoy an excellent pay and benefits package. There'll be more time to spend with your family. You'll receive 30 days of vacation with pay each year. And you will work with modern equipment and some of the most highly trained professionals in the world, serving your country and your patients. Now that's special! Find out just how special your practice can be. Call

TSgt James H. Sisley

(402) 556-0715

COLLECT



COUNCILOR DISTRICTS AND COUNTIES

First District: Councilor: Richard B. Svehla, Omaha. Counties: Douglas, Sarpy.
Second District: Councilor: Sushil S. Lacy, Lincoln. Counties: Cass, Lancaster, Otoe.
Third District: Councilor: C. T. Frerichs, Beatrice. Counties: Gage, Johnson, Nemaha, Pawnee, Richardson.
Fourth District: Councilor: Roger Massie, Plainview. Counties: Antelope, Cedar, Cuming, Dakota, Dixon, Knox, Madison, Pierce, Stanton, Thurston, Wayne.
Fifth District: Councilor: William Chleborad, M.D., Fremont. Counties: Boone, Burt, Colfax, Dodge, Merrick, Nance, Platte, Washington.
Sixth District: Councilor: Robert Herpolsheimer, M.D., Seward. Counties: Butler, Hamilton, Polk, Saunders, Seward, York.
Seventh District: Councilor: Robert Quick, M.D., Crete. Counties: Clay, Fillmore, Jefferson, Nuckolls, Saline, Thayer.
Eighth District: Councilor: Floyd H. Shiffermiller, Ainsworth. Counties: Boyd, Brown, Cherry, Holt, Keya Paha, Rock, Sheridan.
Ninth District: Councilor: Stanley Nabity, Grand Island. Counties: Blaine, Buffalo, Custer, Dawson, Garfield, Grant, Greeley, Hall, Hooker, Howard, Loup, Sherman, Thomas, Valley, Wheeler.
Tenth District: Councilor: David R. Little, M.D., Hastings. Counties: Adams, Chase, Dundy, Franklin, Frontier, Furnas, Gosper, Harlan, Hayes, Hitchcock, Kearney, Phelps, Red Willow, Webster.
Eleventh District: Councilor: Donald E. Fischer, North Platte. Counties: Arthur, Deuel, Garden, Keith, Lincoln, Logan, McPherson, Perkins.
Twelfth District: Councilor: Donald E. Wilkinson, Alliance. Counties: Banner, Box Butte, Cheyenne, Dawes, Kimball, Morrill, Scotts Bluff, Sioux.

NEBRASKA MEDICAL ASSOCIATION Councilor Districts and Component County Medical Societies COMPONENT COUNTY MEDICAL SOCIETIES

COUNTY	PRESIDENT	SECRETARY-TREASURER
Adams	Kevin Wycoff, Hastings	Richard French, Hastings
Antelope-Pierce	Kenneth Peters, Plainview	David Johnson, Osmond
Box Butte	Wendell Fairbanks, Alliance	Chris Wilkinson, Alliance
Buffalo	John Schulte, Kearney	Gerry Jensen, Kearney
Butler	Victor Thoendel, David City	Jack Kaufmann, David City
Cass	R. R. Anderson, Nehawka	Glen K. Knosp, Elmwood
Cheyenne-Kimball-Deuel	James Thayer, Sidney	Clinton Dorwart, Sidney
Cuming		Gordon Moshman, West Point
Custer	Loren Jacobsen, Broken Bow	N. Leon Books, Broken Bow
Dawson		Rodney Sitorius, Cozad
Dodge	Rod Koerber, Fremont	W. B. Eaton, Fremont
Five	Willis L. Wiseman, Wayne	Robert Benthack, Wayne
Four	Tom Martin, Ord	Otis Miller, Ord
Gage	Alan Langvardt, Beatrice	Louis J. Gogela, Jr., Beatrice
Hall	L. W. Hake, Grand Island	Gordon Francis, Grand Island
Hamilton	M. D. Jobman, Aurora	G. D. Penner, Aurora
Holt & Northwest	Melvin Campbell, Ainsworth	John Bryd, Valentine
Jefferson	Gordon O. Johnson, Fairbury	R. A. Blatny, Fairbury
Knox	D. M. Laflan, Creighton	D. J. Nagengast, Bloomfield
Lancaster	C. L. Barton, Lincoln	M. A. Breiner, Lincoln
Lincoln	Dell Shepherd, North Platte	Timothy O'Holleran, North Platte
Madison	G. Tom Surber, Norfolk	C. Robert Adams, Norfolk
Metropolitan Omaha	Jerald R. Schenken, Omaha	F. F. Paustian, Omaha
Northeast	G. Tom Surber, Norfolk	C. Robert Adams, Norfolk
Northwest	Joel Hutchens, Gordon	R. H. Rasmussen, Chadron
Otoe	Dean R. Thomson, Nebraska City	Paul R. Madison, Nebraska City
Keith-Perkins-Chase	Berl W. Spencer, Ogallala	E. A. Holyoke, Ogallala
Platte-Loup Valley	Arthur Liebenritt, Columbus	Dwight Rickard, Columbus
Saline		Robert E. Tuma, Crete
Sarpy	Fred Gaweci, Papillion	Fred Schwartz, Papillion
Saunders	I. M. French, Wahoo	John E. Hansen, Jr., Wahoo
Scotts Bluff	Lowell Stratton, Mitchell	Vonn Roberts, Scottsbluff
Seward	Paul Plessman, Seward	Van Vahle, Seward
South Central	Jeff Hollis, Geneva	Chas. F. Ashby, Geneva
Southeast Nebr.	Gary Ens, Auburn	George Voigtlander, Pawnee City
Southwest Nebr.	David A. Allerheiligen, McCook	E. C. Beyer, McCook
Washington-Burt	H. Neal Sievers, Blair	K. C. Bagby, Blair
York	James D. Bell, York	Darroll J. Loschen, York

**OMAHA MID-WEST
CLINICAL SOCIETY**

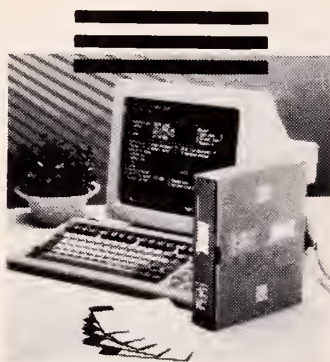
**55th ANNUAL
POSTGRADUATE ASSEMBLY**

OCTOBER 26, 27, 28, 1987

RED LION INN
Omaha, Nebraska

For Information Contact:

Lorraine Seibel
Omaha Mid-west Clinical Society
7363 Pacific Street, Suite 205-B
Omaha, Nebraska 68114
(402) 397-1443



Physicians who have
thoroughly investigated their
choices are selecting MDX*
medical data software.

MDX

*MDX is a trademark of Calyx, Inc.

Call us about the multi-user,
multi-tasking MDX system.
We will send you a video tape
presentation.



INFO-BUILDERS, INC.

402/331-2546
11203 JOHN GALT BOULEVARD
OMAHA, NEBRASKA 68137

Providing complete installation, training and
support services.

AMA News Notes

The AMA Dept. of State Legislation reports that Iowa has passed a new law that would apply to AIDS cases. The law requires that prisoners in state penal institutions "who bite another person, who cause exchange of bodily fluids with another person, or who cause any bodily secretion to be cast upon another person to submit to withdrawal of a bodily specimen for testing to determine if the person is infected with a contagious infectious disease".

According to the law, any prisoner found to have an infectious disease could be segregated from other prisoners.

Louisiana is the first state to require clinical testing to detect the presence of the AIDS antibody prior to issuance of a marriage license. If the tests indicate the presence of the antibody in either party, an affidavit must be furnished from a physician stating that the physician has informed both parties of the test results and has counselled the parties concerning AIDS. The costs of testing are to borne by the applicants. A similar measure has passed the Illinois General Assembly and is awaiting the Governor's signature.

Montana recently passed a law prohibiting blood and urine testing for drugs and alcohol as a condition of employment. Exceptions are provided for employment in hazardous work environments, in jobs involving public safety, and where the employer has reason to believe that employee's faculties are impaired from alcohol or drug use.

Maine recently enacted two laws on the subject of smoking. One statute makes it illegal to sell cigarets by vending machine in a location not supervised by an adult. The other statute requires restaurants to provide a no-smoking area, and to display a sign indicating their policy on seating smokers and non-smokers.

* * *

Physician participation in health maintenance organizations (HMOs), preferred provider organizations (PPOs), and ambulatory care centers (ACCs) increased between 1983

and 1986, according to findings by the AMA Center for Health Policy Research.

Recent data from the AMA's Socioeconomic Monitoring Survey show that:

- More than 42% of physicians surveyed in 1986 contracted with an HMO.

- PPO contracting more than tripled, from 10.9% to 38.3% between 1983 and 1986.

- Care through ACCs increased from 9% of physicians surveyed in 1983 to 12.8% of those surveyed in 1986.

- The proportion of physicians in solo practice remained essentially the same between 1983 and 1986, according to center research findings, declining from 48.9% of those surveyed to 47.7%.

* * *

Total patient visits per physician decreased in 1986, as part of 2.1% annual rate of decline since 1982, say analysts at AMA's Center for Health Policy Research.

Figures from the AMA's Socioeconomic Monitoring Survey (SMS) show that a 6% decline in inpatient hospital visits primarily accounts for the overall decrease. Patient visits increased, meanwhile, to physicians' offices, hospital outpatient departments and emergency rooms, and ambulatory care centers.

According to a study described in the Center's latest *SMS Report*, a 1986 increase in office visits, to 3,645 from 3,560 in 1985 contrasts with a 1982-1985 trend showing an average annual decrease of 1.9%. Medical specialists have been most successful in maintaining and increasing patient volume, the study concludes.

* * *

The AMA scored several significant victories in the Energy and Commerce Committee August 6. As a result of intense lobbying and the excellent response by the Federation to the Call to Action on the proposed Dowdy/Bliley amendment, AMA supporters on the Committee were able to negotiate 1) deletion of Mandatory Assignment from the Radiology Agreement; 2) restricting the scope of the Radiology Agreement to cover ONLY

(continued on page 21-A)

THE NAVAL RESERVE NEEDS YOU!

The Naval Reserve is actively seeking Physicians due to the expanded requirements of the military Fleet Hospital Program. All medical specialties are needed, particularly Surgeons and Anesthesiologists.

Alter your Practice routine by serving your country as a Naval Officer.

We offer:

- Flexibility in drill schedule
- 4 days' pay for 2 days' work
- Educational loan repayment program
- Continuing Medical Education (CME)
- The opportunity to travel and do something special
- Contact (913) 764-3664

Creighton University Medical Center
announces the Second Annual

A DAY WITH THE PERINATOLOGISTS

At The Red Lion Inn
Omaha, Nebraska

September 25-26

COURSE DIRECTOR: Washington C. Hill, M.D.
Director, Maternal-Fetal Medicine
and The Perinatal Center

FACULTY:

Richard O. Depp, M.D.
Washington C. Hill, M.D.
Kathleen A. Kuhlman, M.D.
Michael G. Levine, M.D.
Jennifer R. Niebyl, M.D.
William F. Rayburn, M.D.



AMA CATEGORY I
CREDITS AND ACOG
COGNATES AVAILABLE

Registration Fee:
\$195.00

For further information:
Office of Continuing
Education
Creighton University
School of Medicine
Omaha, NE 68178
Call: 1-800-228-7212
ext. 2550

ORGANIZATIONS, NATIONAL

American Academy of Family Physicians
1740 West 92nd St., Kansas City, MO 64114

American Academy of Pediatrics
James E. Strain, M.D., Executive Director
141 Northwest Point Road, P.O. Box 927
Elk Grove Village, IL 60009-0927

American Academy of Physician Assistants
F. Lynn Maly, Executive Vice President
1117 N. 19th St., 3rd Floor
Arlington, VA 22209

American Academy of Ophthalmology
Thomas P. Kearns, M.D., President
655 Beach Street, P.O. Box 7424
San Francisco, CA 94120-7424

American College of Emergency Physicians
Colin C. Rorrie, Jr., Ph.D., Executive Director
Box 619911, Dallas, TX 75261-9911

American College of Legal Medicine
Mr. Thomas W. Teal, Executive Secretary
P.O. Box 190, Maple Glen, PA 19002

American College of Obstetricians & Gynecologists
Warren H. Pearse, M.D., Executive Director
600 Maryland Avenue, S.W., Ste. 300 E
Washington, D.C. 20024

American College of Physicians
John R. Ball, M.D., J.D., F.A.C.P., Exec. Vice President
4200 Pine St., Philadelphia, PA 19104

American College of Radiology
John J. Curry, Executive Director
1981 Preston White Drive, Reston, VA 22091

American College of Surgeons
Paul A. Ebert, M.D., Director
55 East Erie St., Chicago, IL 60611

American Diabetes Association, Inc.
Robert S. Bolan, Exec. Vice President
1660 Duke Street, Alexandria, VA 22314

American Heart Association National Center
Mr. Dudley Hafner, Exec. Vice President
7320 Greenville Ave., Dallas, TX 75231

American Hospital Association
Carol M. McCarthy, Ph.D., J.D., President
840 North Lake Shore Dr., Chicago, IL 60611

American Medical Association
James H. Sammons, M.D., Exec. Vice President
535 No. Dearborn St., Chicago, IL 60610

American Society of Anesthesiologists
Mr. J. W. Andes, Executive Secretary
515 Busse Hwy., Park Ridge, IL 60068

American Society of Clinical Pathologists
Robert A. Dietrich, M.D., Chief Executive
2100 W. Harrison St., Chicago, IL 60612

American Society of Internal Medicine
Joseph F. Boyle, M.D., Exec. Vice President
1101 Vermont N.W., Ste. 500, Washington, D.C. 20005

American Urological Society
Mr. Richard J. Hannigan, Executive Secretary
1120 No. Charles St., Baltimore, MD 21201

Arthritis Foundation
Clifford M. Clarke, C.A.E., President
1314 Spring St., N.W., Atlanta, GA 30309

International College of Surgeons
F. C. Ottati, M.D., Int. Sec. General
1516 North Lake Shore Dr., Chicago, IL 60610

National Rehabilitation Association
633 S. Washington St., Alexandria, VA 22314

Radiological Society of North America
Richard E. Buenger, M.D., President
1415 W. 22nd St., Oak Brook, IL 60521

South Central Section of the American Urological Association, Inc.
Henry Kammendel, M.D., Past President
8300 Dodge St., Ste. 407, Omaha, NE 68114



BRIEF SUMMARY

CONTRAINDICATIONS

There are no known contraindications to the use of sucralfate.

PRECAUTIONS

Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that the simultaneous administration of CARAFATE with tetracycline, phenytoin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. The clinical significance of these animal studies is yet to be defined.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No evidence of drug-related tumorigenicity was found in chronic oral toxicity studies of 24 months' duration conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies have not been conducted.

Pregnancy: Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients, adverse effects were reported in 121 (4.7%). Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

DOSAGE AND ADMINISTRATION

The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

HOW SUPPLIED

CARAFATE (sucralfate) 1-gm pink tablets are supplied in bottles of 100 and in Unit Dose Identification Paks of 100. The tablets are embossed with MARION/1712.

Issued 3/84

References:

1. Korman MG, Shaw RG, Hansky J, et al: *Gastroenterology* 80:1451-1453, 1981.
2. Korman MG, Hansky J, Merrett AC, et al: *Dig Dis Sci* 27:712-715, 1982.
3. Brandstaetter G, Kratochvil P: *Am J Med* 79(suppl 2C):36-38, 1985.
4. Marks IN, Wright JP, Gilinsky NH, et al: *J Clin Gastroenterol* 8:419-423, 1986.
5. Lam SK, Hui WM, Lau WY, et al: *Gastroenterology* 92:1193-1201, 1987.



1594H7

Ulcer therapy that won't yield, even to smoking

YIELD



What do you do for duodenal ulcer patients who should stop smoking, but won't? Both cimetidine¹ and ranitidine² have been shown less effective in smokers than nonsmokers.

Choose CARAFATE® (sucralfate/Marion). Two recent studies show Carafate to be as effective in smokers as nonsmokers.^{3,4} A difference further illustrated in a 283-patient study comparing sucralfate to cimetidine⁵:

Ulcer healing rates:
(at four weeks of therapy)⁵

Sucralfate:

All patients 79.4%

Smokers 81.6%*

Cimetidine:

All patients 76.3%

Smokers 62.5%

*Significantly greater than cimetidine smoker group ($P < .05$).

Carafate has a unique, nonsystemic mode of action that enhances the body's own ulcer healing ability and protects the damaged mucosa from further injury.

When your ulcer patient is a smoker, prescribe the ulcer medication that won't go up in smoke: safe, nonsystemic Carafate.

Nothing works like


CARAFATE®
sucralfate/Marion

Please see adjoining page for references and brief summary of prescribing information.

1594H7

There's never been a better time for her





and **PREMARIN[®]**

**Proven benefits beyond relief
of vasomotor symptoms**

**No other estrogen proven
effective for osteoporosis**

Only conjugated estrogens tablets have established efficacy in both osteoporosis¹ and vasomotor symptoms* at 0.625 mg/day. No other estrogen, oral or transdermal, has established clinical evidence or minimum effective dose in both indications.

No estrogen proven safer

PREMARIN is the most extensively tested estrogen, with an unsurpassed record of long-term safety.

And clinical evidence shows a significantly reduced risk of endometrial hyperplasia when cycled with a progestin.²

PREMARIN[®]
(conjugated estrogens tablets)

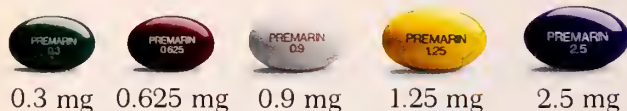
Most trusted for more reasons

*PREMARIN is indicated for moderate-to-severe vasomotor symptoms.

Please see following page for brief summary
of prescribing information.

For moderate-to-severe
vasomotor symptoms and
for osteoporosis

PREMARIN® (conjugated estrogens tablets)



The appearance of these tablets is a trademark of Ayerst Laboratories.

BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION AND PATIENT INFORMATION, SEE PACKAGE CIRCULARS.)

PREMARIN® Brand of conjugated estrogens tablets, USP
PREMARIN® Brand of conjugated estrogens Vaginal Cream, in a nonliquefying base

1 ESTROGENS HAVE BEEN REPORTED TO INCREASE THE RISK OF ENDOMETRIAL CARCINOMA. Three independent, case-controlled studies have reported an increased risk of endometrial cancer in postmenopausal women exposed to exogenous estrogens for more than one year. This risk was independent of the other known risk factors for endometrial cancer. These studies are further supported by the finding that incidence rates of endometrial cancer have increased sharply since 1969 in eight different areas of the United States with population-based cancer reporting systems, an increase which may be related to the rapidly expanding use of estrogens during the last decade. The three case-controlled studies reported that the risk of endometrial cancer in estrogen users was about 4.5 to 13.9 times greater than in nonusers. The risk appears to depend on both duration of treatment and on estrogen dose. In view of these findings, when estrogens are used for the treatment of menopausal symptoms, the lowest dose that will control symptoms should be utilized and medication should be discontinued as soon as possible. When prolonged treatment is medically indicated, the patient should be reassessed on at least a semi-annual basis to determine the need for continued therapy. Although the evidence must be considered preliminary, one study suggests that cyclic administration of low doses of estrogen may carry less risk than continuous administration; it therefore appears prudent to utilize such a regimen. Close clinical surveillance of all women taking estrogens is important. In all cases of undiagnosed persistent or recurring abnormal vaginal bleeding, adequate diagnostic measures should be undertaken to rule out malignancy. There is no evidence at present that "natural" estrogens are more or less hazardous than "synthetic" estrogens at equi-estrogenic doses.

2 ESTROGENS SHOULD NOT BE USED DURING PREGNANCY. The use of female sex hormones, both estrogens and progestogens, during early pregnancy may seriously damage the offspring. It has been shown that females exposed in utero to diethylstilbestrol, a nonsteroidal estrogen, have an increased risk of developing, in later life, a form of vaginal or cervical cancer that is ordinarily extremely rare. This risk has been estimated as not greater than 4 per 1,000 exposures. Furthermore, a high percentage of such exposed women (from 30% to 90%) have been found to have vaginal adenosis, epithelial changes of the vagina and cervix. Although these changes are histologically benign, it is not known whether they are precursors of malignancy. Although similar data are not available with the use of other estrogens, it cannot be presumed they would not induce similar changes. Several reports suggest an association between intrauterine exposure to female sex hormones and congenital anomalies, including congenital heart defects and limb-reduction defects. One case-controlled study estimated a 4.7-fold increased risk of limb-reduction defects in infants exposed in utero to sex hormones (oral contraceptives, hormone withdrawal tests for pregnancy or attempted treatment for threatened abortion). Some of these exposures were very short and involved only a few days of treatment. The data suggest that the risk of limb-reduction defects in exposed fetuses is somewhat less than 1 per 1,000. In the past, female sex hormones have been used during pregnancy in an attempt to treat threatened or habitual abortion. There is considerable evidence that estrogens are ineffective for these indications, and there is no evidence from well-controlled studies that progestogens are effective for these uses. If PREMARIN is used during pregnancy, or if the patient becomes pregnant while taking this drug, she should be apprised of the potential risks to the fetus, and the advisability of pregnancy continuation.

DESCRIPTION: PREMARIN (conjugated estrogens, USP) contains a mixture of estrogens, obtained exclusively from natural sources, blended to represent the average composition of material derived from pregnant mares' urine. It contains estrone, equilin, and 17 α -dihydroequilin, together with smaller amounts of 17 α -estradiol, equilenin, and 17 α -dihydroequilenin as salts of their sulfate esters. Tablets are available in 0.3 mg, 0.625 mg, 0.9 mg, 1.25 mg, and 2.5 mg strengths of conjugated estrogens. Cream is available as 0.625 mg conjugated estrogens per gram.

INDICATIONS AND USAGE: PREMARIN (conjugated estrogens tablets, USP) Moderate-to-severe vasomotor symptoms associated with the menopause. (There is no evidence that estrogens are effective for nervous symptoms or depression without associated vasomotor symptoms and they should not be used to treat such conditions.) Osteoporosis (abnormally low bone mass). Atrophic vaginitis. Kraurosis vulvae. Female castration.

PREMARIN (conjugated estrogens) Vaginal Cream is indicated in the treatment of atrophic vaginitis and kraurosis vulvae.

PREMARIN HAS NOT BEEN SHOWN TO BE EFFECTIVE FOR ANY PURPOSE DURING PREGNANCY AND ITS USE MAY CAUSE SEVERE HARM TO THE FETUS (SEE BOXED WARNING).

Concomitant Progestin Use: The lowest effective dose appropriate for the specific indication should be utilized. Studies of the addition of a progestin for 7 or more days of a cycle of estrogen administration have reported a lowered incidence of endometrial hyperplasia. Morphological and biochemical studies of the endometrium suggest that 10 to 13 days of progestin are needed to provide maximal maturation of the endometrium and to eliminate any hyperplastic changes. Whether this will provide protection from endometrial carcinoma has not been clearly established. There are possible additional risks which may be associated with the inclusion of progestin in estrogen replacement regimens. (See PRECAUTIONS.) The choice of progestin and dosage may be important; product labeling should be reviewed to minimize possible adverse effects.

CONTRAINDICATIONS: Estrogens should not be used in women (or men) with any of the following conditions: 1. Known or suspected cancer of the breast except in appropriately selected patients being treated for metastatic disease. 2. Known or suspected estrogen-dependent neoplasia. 3. Known or suspected pregnancy (see Boxed Warning). 4. Undiagnosed abnormal genital bleeding. 5. Active thrombophlebitis or thromboembolic disorders. 6. A past history of thrombophlebitis, thrombosis, or thromboembolic disorders associated with previous estrogen use (except when used in treatment of breast or prostatic malignancy).

WARNINGS: Estrogens have been reported to increase the risk of endometrial carcinoma (see Boxed Warning). However, a recent large, case-controlled study indicated no increase in risk of breast cancer in postmenopausal women. A recent study has reported a 2- to 3-fold increase in the risk of surgically confirmed gallbladder disease in women receiving postmenopausal estrogens.

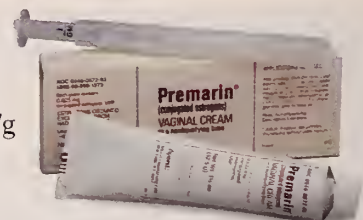
Adverse effects of oral contraceptives may be expected at the larger doses of estrogen used to treat prostatic or breast cancer or postpartum breast engorgement; it has been shown that there is an increased risk of thrombosis in men receiving estrogens for prostatic cancer and women for postpartum breast engorgement. Users of oral contraceptives have an increased risk of diseases, such as thrombophlebitis, pulmonary embolism, stroke, and myocardial infarction. Cases of retinal thrombosis, mesenteric thrombosis, and optic neuritis have been reported in oral contraceptive users. An increased risk of postsurgery thromboembolic complications has also been reported in users of oral contraceptives. If feasible, estrogen should be discontinued at least 4 weeks before surgery of the type associated with an increased risk of thromboembolism, or during periods of prolonged immobilization. Estrogens should not be used in persons with active thrombophlebitis, thromboembolic disorders, or in persons with a history of such disorders in association with estrogen use. They should be used with caution in patients with cerebral vascular or coronary artery disease. Large doses (5 mg conjugated estrogens per day), comparable to those used to treat cancer of the prostate and breast, have been shown to increase the risk of nonfatal myocardial infarction, pulmonary embolism, and thrombophlebitis. When doses of this size are used, any of the thromboembolic and thrombotic adverse effects should be considered a clear risk.

For atrophic vaginitis

PREMARIN® (conjugated estrogens)

Vaginal
Cream

0.625 mg/g



Benign hepatic adenomas should be considered in estrogen users having abdominal pain and tenderness, abdominal mass, or hypovolemic shock. Hepatocellular carcinoma has been reported in women taking estrogen-containing oral contraceptives. Increased blood pressure may occur with use of estrogens in the menopause and blood pressure should be monitored with estrogen use. A worsening of glucose tolerance has been observed in patients on estrogen-containing oral contraceptives. For this reason, diabetic patients should be carefully observed. Estrogens may lead to severe hypercalcemia in patients with breast cancer and bone metastases.

PRECAUTIONS: Physical examination and a complete medical and family history should be taken prior to the initiation of any estrogen therapy with special reference to blood pressure, breasts, abdomen, and pelvic organs, and should include a Papanicolaou smear. As a general rule, estrogen should not be prescribed for longer than one year without another physical examination being performed. Conditions influenced by fluid retention, such as asthma, epilepsy, migraine, and cardiac or renal dysfunction, require careful observation. Certain patients may develop manifestations of excessive estrogenic stimulation, such as abnormal or excessive uterine bleeding, mastodynia, etc. Prolonged administration of unopposed estrogen therapy has been reported to increase the risk of endometrial hyperplasia in some patients. Oral contraceptives appear to be associated with an increased incidence of mental depression. Patients with a history of depression should be carefully observed. Pre-existing uterine leiomyomata may increase in size during estrogen use. The pathologist should be advised of estrogen therapy when relevant specimens are submitted. If jaundice develops in any patient receiving estrogen, the medication should be discontinued while the cause is investigated. Estrogens should be used with care in patients with impaired liver function, renal insufficiency, metabolic bone diseases associated with hypercalcemia or in young patients in whom bone growth is not yet complete. If concomitant progestin therapy is used, potential risks may include adverse effects on carbohydrate and lipid metabolism.

The following changes may be expected with larger doses of estrogen.

- Increased subfibrinolytic retention.
- Increased prothrombin and factors VII, VIII, IX, and X, decreased antithrombin 3, increased norepinephrine-induced platelet aggregability.

- Increased thyroid binding globulin (TBG) leading to increased circulating total thyroid hormone, as measured by T₄ by column, or T₄ by radioimmunoassay. Free T₃ resin uptake is decreased, reflecting the elevated TBG. Free T₄ concentration is unaltered.

- Impaired glucose tolerance.
- Decreased prenatation diol excretion.
- Reduced response to meprobamate test.
- Reduced serum folate concentration.
- Increased serum triglyceride and phospholipid concentration.

As a general principle, the administration of any drug to nursing mothers should be done only when clearly necessary since many drugs are excreted in human milk.

Long-term, continuous administration of natural and synthetic estrogens in certain animal species increases the frequency of carcinomas of the breast, cervix, vagina, and liver. However, in a recent, large case-controlled study of postmenopausal women there was no increase in risk of breast cancer with use of conjugated estrogens.

ADVERSE REACTIONS: The following have been reported with estrogenic therapy, including oral contraceptives: breakthrough bleeding, spotting, change in menstrual flow, dysmenorrhea, premenstrual-like syndrome, amenorrhea during and after treatment, increase in size of uterine fibromyomata, vaginal candidiasis, change in cervical erosion and in degree of cervical secretion, cystitis-like syndrome, tenderness, enlargement, secretion (of breasts), nausea, vomiting, abdominal cramps, bloating, cholestatic jaundice, chloasma or melasma (which may persist when drug is discontinued), erythema multiforme, erythema nodosum, hemorrhagic eruption, loss of scalp hair, hirsutism, steepening of corneal curvature, intolerance to contact lenses, headache, migraine, dizziness, mental depression, chorea, increase or decrease in weight, reduced carbohydrate tolerance, aggravation of porphyria, edema, changes in libido.

ACUTE OVERDOSEAGE: May cause nausea, and withdrawal bleeding may occur in females.

DOSE AND ADMINISTRATION:

PREMARIN® Brand of conjugated estrogens tablets, USP

1. Given cyclically for short-term use only. For treatment of moderate-to-severe vasomotor symptoms, atrophic vaginitis, or kraurosis vulvae associated with the menopause (0.3 mg to 1.25 mg or more daily). The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible. Administration should be cyclic (eg, three weeks on and one week off). Attempts to discontinue or taper medication should be made at three- to six-month intervals.

2. Given cyclically. Osteoporosis. Female castration. Osteoporosis—0.625 mg daily. Administration should be cyclic (eg, three weeks on and one week off). Female castration—1.25 mg daily cyclically. Adjust upward or downward according to response of the patient. For maintenance, adjust dosage to lowest level that will provide effective control.

Patients with an intact uterus should be monitored for signs of endometrial cancer and appropriate measures taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

PREMARIN® Brand of conjugated estrogens Vaginal Cream

Given cyclically for short-term use only. For treatment of atrophic vaginitis or kraurosis vulvae.

The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible.

Administration should be cyclic (eg, three weeks on and one week off). Attempts to discontinue or taper medication should be made at three- to six-month intervals.

Usual dosage range 2 g to 4 g daily, intravaginally, depending on the severity of the condition.

Treated patients with an intact uterus should be monitored closely for signs of endometrial cancer and appropriate diagnostic measures should be taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

References:

1. Lindsay R, Hart OM, Clark OM. The minimum effective dose of estrogen for prevention of postmenopausal bone loss. *Obstet Gynecol* 1984;63:759-763. 2. Studd JWW, Thom MH, Paterson MEL, et al. The prevention and treatment of endometrial pathology in postmenopausal women receiving exogenous estrogens, in Pasetti N, Paoletti R, Ambrus JL (eds). *The Menopause and Postmenopause*. Lancaster, England, MTP Press Ltd, 1980, chap 13.

© 1987 Ayerst Laboratories
All rights reserved

Ayerst® AYERST LABORATORIES
New York, NY 10017

THE NEBRASKA MEDICAL JOURNAL

Why Are You In My Room?

RECENTLY an acquaintance of mine was hospitalized in our local hospital. She was suffering from depression following the loss of her husband. I visited her a time or two and we had a good talk. Afterwards, she wrote down some of her thoughts and gave them to me. The way she expressed herself impressed me so that I asked her if I might share her thoughts with our readers. She has kindly granted me permission to do this. The text of her writing — with a few deletions — follows:

"When visiting a person who has just lost his or her mate, explain who you are and why you are there. Also inform the family how they might contact you. You are facing a person who has just suffered a traumatic loss. This person doesn't know how to express grief, can't express it, isn't allowed to express it, or won't express it. Don't give up on us. Ask us outright. You have already identified that I have a problem. You have opened a door for me to talk. If I hesitate or fail to respond, don't ask me what I would like to talk about. I don't know you well and I am not quite sure why you are in my room. Get a conversation started. Ask about how long I was married, did we have any children, what kind of work did he do, what kind of a person was he — keep me talking about him. This is what I need to do.

We have special needs — we, the surviving spouse. We can't even talk to our children. They say, "Don't talk about Dad, Mom. We miss him as much as you do." So one more avenue to talk has been closed. Please realize that I am in shock and am devastated by the loss of my husband. I've already been told to "look on the positive side; at least he isn't suffering," or, "It's God's will that he die." I already knew he was dying! I need your friendship, your compassion, your company, not another put-down. Don't tell me I'll find someone new. This is the greatest hurt of all. Don't act as if nothing happened. Say, "I'm sorry," if you can't think of anything else to

EDWARD A. HOLYOKE, M.D.,
Ogallala

say. Don't tell me not to grieve or be sad. I need the relief that grieving can give me. Finally, the burden of grief that cannot be expressed becomes a tremendously inflated burden. With all this unexpressed grief, I am trying to rationalize all by myself that he's gone.

How can this happen? He had been this ill before and he didn't die! How can this happen? You are the professional. Interpret this for me! Tell me sometimes the very best of medical help and medical knowledge is powerless to save our loved ones. You alone can explain this for me and affirm it for me. This is a whole new concept for me. My husband, the kindest, gentlest man I ever knew is dead. Tell me also that the doctors who have treated him for the last twenty years as a patient and friend are also saddened and frustrated to lose a patient who entrusted his life to them. Be sincere and interested. Be sensitive to my need to talk about him, and yet my reluctance to share even a tiny bit of him with you.

Get involved with us; show us how we can achieve satisfaction from our grief. We were happy, the two of us. We watched our kids grow, our cherished dreams come true, and our plans become realities. We experienced life's deepest joy as man and wife. Our love was the kind that grew all during our married life. We thought the future was ours. We'd even made plans for that. Be aware that my arms just ache to hold him close and I ache to have him hold me. Let me know this is a normal feeling. It has

been virtually impossible for me to talk to anyone. They don't want to hear sad stories. We are emotionally vulnerable, we new widows. We are lonely and sad beyond belief. This feeling of being alone is overpowering. This role of changing from wife to widow is a very complex part of my life. Please help me to see that I can cherish my fondest memories and still face life each day. Don't wait until I am admitted to the hospital utterly beside myself with grief. I have very special needs at this time. Extend me a helping hand. You are

skilled professionals, trained to help me express and accept my grief. Your skills can't be provided by just lay people. We have a critical need of your services."

As I read this, I began to think that we as physicians really do have a unique opportunity, a unique role, and, yes, a unique responsibility to help those who are berieved. Why are we in their rooms? To try to help them get through difficult times! This letter really helped me realize the immensity of this task.

Artificial Tanning

A fundamental concept, basic to physicians' decision-making process when evaluating the appropriateness of therapies and procedures, is the risk/benefit ratio. The implementation of this principle as applied to artificial tanning leads to a straightforward, clear statement of position. The risks resulting from exposure of unprotected skin to ultraviolet light, although potentially realized in the distant future, are very real. They include premature aging, premalignant changes including unsightly keratoses, and cancer itself — sometimes fatal. Alternatively, the actual health benefits of artificial tanning in individuals not having cutaneous disease approximates zero. Nevertheless, as in any situation involving complex human attitudes and behavior, this simple reality, presented as dogma, is regularly disregarded, commonly resented, and on occasion, openly attacked. An informed position allowing for flexibility, while not digressing to complete permissiveness, can result in maximum attainable patient protection and compliance.

The Psychology of Skin Pigmentation

Just as the callous represents a compensatory attempt by the skin to respond to chronic friction injury, hyperpigmentation in the form of the oft-envied dark tan, represents the cutaneous response to ultraviolet injury. Given this medical fact, why do large portions of the population strive to present to the world the maximum amount of injury they can attain? What is the basis for the ill-conceived self-contradictory description of a "healthy tan"? Obviously, the answer lies in attitudes, not grounded in scientific fact, but based on incorrect intuitive perceptions deeply ingrained in the collective psyche of modern-day humanity.

Historically, society has exhibited views toward the desirability of hyperpigmented skin which have been incongruous from one period to the next. The Pre-Columbian Mayas ascribed deity to light-skinned individuals and nearly every description of their man-god Kukulcan includes some allusion to his white skin. In accordance with this concept, the Spanish invaders were accepted and worshiped rather

RODNEY S. W. BASLER, M.D.*

Assistant Professor of Internal Medicine (Dermatology)
University of Nebraska Medical Center

than appropriately feared and resisted, contributing to the ease of their conquest.

In 18th Century France, porcelain paleness was sought with such fervor that, analogous to present attitudes, significant health risks were accepted while achieving the desired coloration. In this period, stylish women of highbearing would apply lead-based opaque make-up to their skin, occasionally resulting in lead poisoning with attendant loss of hair and even teeth! The cosmetic intent during this period seems to have been socioeconomic, albeit with opposite conclusions and consequences from today. Because peasants worked in the fields, their skins' were perpetually tanned, while those born to the high families of the court were not reduced to outdoor labor and wore their sallow countenances as a badge of distinction.

With the industrial revolution, manual labor, relegated as always to the working class, moved from the fields to the factory. As a matter of course, the members of the highest socioeconomic classes soon began sporting tans in order to achieve the same desired result - to be distinguished from the working class. Today, in an age of flexible working hours and maximized recreation time, nearly anyone who wishes can attain a tan during the months of sunshine. Now the mark of distinction is the manifestation of a deep, dark tan during the winter months, suggesting the means to travel to exotic warmer climates. To fill the need to produce the color while eliminating the travel, artificial tanning salons have appeared on the scene.

*Reprint Requests: 2756 O Street, Lincoln, NE 68510.

The Facts

The deleterious effects of long-term indiscriminant exposure of the skin to ultraviolet light is now an unquestioned point of medical knowledge. Ultraviolet light originating from the sun within the spectrum of wave lengths which reaches the earth is responsible for alterations in the skin which result in the acceleration of the aging process. This effect produces wrinkles and premalignant keratoses and can stimulate malignant transformation of normal skin tissue into basal and squamous cell carcinomas and even malignant melanomas.¹

The ultraviolet (UV) spectrum is divided into three bands designated as UVA, UVB, and UVC (Figure 1). The latter are absorbed by ozone in the earth's outer atmosphere and are not naturally present in sunlight reaching the surface.¹ UVC has been employed as an antiseptic modality for surgical operating rooms, but is not of concern to the majority of the population. UVB includes those wavelengths from 290 to 320 nm. These rays represent the "erythrogenic" or "sunburn spectrum" and are responsible for the major proportion of photoinjury, both acute and chronic.² It is this spectrum which the commercial sunscreens shield from the skin in varying degrees depending upon their SPF factors³ with a rating of 15 applied to total blocks. The old "sun lamps" principally emitted these rays as do some of the new devices found in "quick tanning" salons and in dermatology offices where they are used therapeutically.

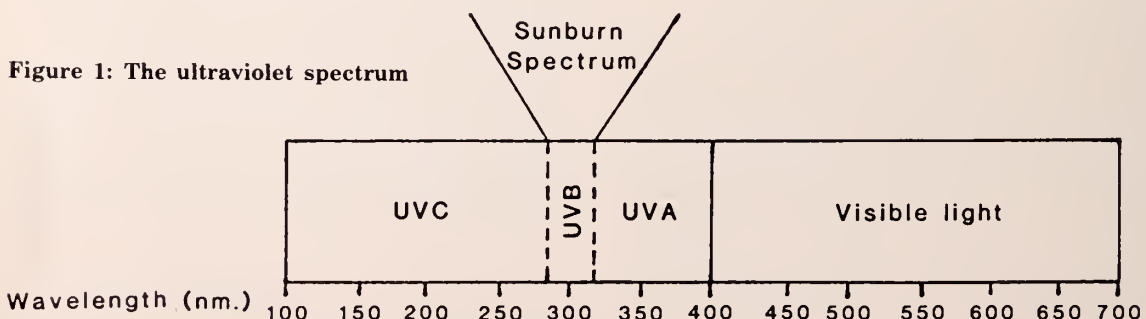
The ultraviolet wavelengths from 320 to 400 nm., the threshold of visible light, are referred to as UVA. Once thought capable of producing a completely safe tan, they represent nearly the total output of most sophisticated light sources incorporated in the tanning beds and booths of present-day tanning salons. Combined with the systemic administration of

psoralen, UVA from either artificial or natural sources⁴ is an accepted, effective treatment for psoriasis and some of the other proliferative skin diseases, the combination being referred to as "PUVA therapy."

The ultraviolet source units employed in most tanning salons are of the UVA type, with about 98-99% of their emission spectrum above the wavelength of 320 nm., most of the rest falling into the more harmful UVB or erythrogenic spectrum.⁵ On the other hand, natural sunlight contains an average of about 3% wavelengths in UVB. However, this percentage is widely variable from one latitude to another and even from one day to the next in the same location, sometimes deviating as much as 2,000 percent!⁵ The UVA bulbs obviously have much more consistent emission, as well as precise accuracy for exposure time. The assumption can be made from this data that artificial tanning really is safer, minute for minute, than exposure to natural sunlight.

An additional positive response gained from exposure to artificial UVA sources is the photoprotective effect of the tan itself. Personal experience has confirmed in the minds of most that a dark tan protects against subsequent sunburn. Recent scientific investigations have substantiated these empirical observations.⁶ This advantage, however, is easily overrated as the maximum screening effect of the darkest tan possible (rarely attained) by a Caucasian is only equal to about SPF 4.⁷ UVB is actually more effective than UVA in producing photoprotective pigmentation. This marginally protective pigmentation, however, should not be considered license for subsequent direct or "active" sun exposure, commonly referred to as "sun bathing." Only incidental or "passive" exposure such as that received as part of outdoor exercise is acceptable, and even that should be minimized.⁸⁻¹⁰

Now for the bad news! UVA exposure of as



little as 12 episodes on alternative days has been shown to cause the type of degenerative changes in the skin which can progress to cancer and lead to a leathery, wrinkled appearance.¹¹ There is great likelihood, therefore, that artificial UVA exposure increases the risks of basal cell and squamous cell carcinomas,¹² although statistical proof of this assumption will require the analysis of large numbers of people followed over extended periods of time. More alarming, the association of lethal malignant melanoma with the use of UVA beds has also been suggested by recent data.¹³

Another unfavorable effect of UVA irradiation of the skin, which is more complex, is the reduction of the epidermal Langerhans cell population after exposure.¹⁴ The Langerhans cell has been shown to play a crucial role within the skin as an antigen-processing cell and in the induction of positive immune responses.¹⁵ It has been theorized that Langerhans cells, therefore, are a critical component of the immune surveillance system which identifies early malignant transformation and initiates appropriate immunodestruction. Up to three weeks may be required for the number of epidermal Langerhans cells to return to normal following ultraviolet exposure.¹⁶ The implication of these findings is that the consequences of UVA are actually doubly damaging in that basal layer cells are being transformed to have malignant potential, at the same time that Langerhans cells which are necessary to identify and remove these aberrant cells are being destroyed.

Recommendations

Based on present scientific evidence, there are certain prudent recommendations which can be given to patients who ask for advice about artificial tanning. First, the individual must be informed of the undeniable truth that no ultraviolet exposure is beneficial for the skin, and tanning itself is evidence of cutaneous injury.

With this basic concept in mind, it can be pointed out that the artificial light sources which emit nearly pure UVA radiation are much safer than their UVB counterparts and somewhat safer than the sun itself. It is also true that artificially-derived pigmentation provides mild protection against subsequent direct solar exposure. In other words, if a patient cannot be discouraged from pursuing a

tan, a few sessions in the tanning bed prior to summer and an occasional visit to augment the pigment during cloudy or rainy periods during the summer months probably causes the least long-term damage. This is true only, however, if the artificial exposure is abruptly stopped with the advent of autumn.

Since three weeks are required for the protective cellular components of the skin to recover after UVA, at least this length of time must be regularly scheduled away from the light source. Weekly, year-round exposure, as has been advocated in some promotional literature, can be predicted to significantly potentiate the damage received from seasonal summer usage. We must recommend that such a course of action be avoided.

References

1. Basler RSW: Damaging effects of sunlight on human skin. *N Med J* 63:337-40, 1978.
2. Basler RSW: Sunscreens. *N Med J* 68:162-65, 1983.
3. Basler RSW, Rheim JE: Sunlight and skin. *J Dermatol Allergy* 5:23-27, 1982.
4. Basler RSW: Psoralen and sunlight for psoriasis in the Southwest. *Cutis* 24:386-88, 1979.
5. Wilkinson FJ: Recommended UV exposure limits for tanning equipment, and spectral irradiances of solarium lamps, sunlamps and daylight. *Australas Phys Eng Sci Med* 6(1):26-34, 1983.
6. Nonaka S, Kaidbey KH, Kligman AM: Photoprotective adaptations. *Arch Dermatol* 120:609-612, 1984.
7. Kaidbey KH, Kligman AM: Sunburn protection by longwave ultraviolet radiation-induced pigmentation. *Arch Dermatol* 114:46-48, 1978.
8. Basler RSW: Skin lesions related to sports activity. *Primary Care* 10:479-494, 1983.
9. Basler RSW: Dermatologic aspects of sports participation. *Current Concepts in Skin Disorders* 6:15-19, 1985.
10. Basler RSW: Skin problems encountered in winter sports, in Casey MJ Ed. *Winter Sports Medicine*, in press.
11. Johnston KJ, Oikarinen AI, Lowe NJ, et al: Ultraviolet radiation-induced connective tissue changes in the skin of hairless mice. *J Invest Dermatol* 82:587-90, 1984.
12. Lichtenstein J, Sherertz EF: Harmful effects of indoor tanning. *Am Fam Physician* 32(3):142-46, 1985.
13. Brodthagen H: Malignant melanoma caused by UVA suntan bed? *Act Derm Venereol (Stockh)* 62:356-57, 1982.
14. Averer W, Schuler G, Stingl G, et al: Ultraviolet light depletes surface markers of Langerhans cells. *J Invest Dermatol* 76:202-206, 1981.
15. Lynch DH, Gurish MF, Daynes RA: The effects of highdose UV exposure on murine Langerhans cell function. *J Invest Dermatol* 81:336-341, 1983.
16. Friedmann RS, Ford G, Ross J, et al: Reappearance of epidermal Langerhans cells after PUVA therapy. *Brit J Dermatol* 109:301-307, 1983.

Experience with Hydatid Disease in Saudi Arabia

IT is becoming more obvious that some exotic diseases can be seen from time to time in the continental U.S. The main reasons are increase in international travel and migration of people from the areas where such diseases are endemic.

Experience with hydatid cyst disease in Saudi Arabia will be shared from radiographic and sonographic examinations. Incidence of infestation by this parasite in the Kingdom of Saudi Arabia is high; therefore different presentations of this interesting disease are plentiful.

Hydatid disease of man is a zoonosis caused by infection with tapeworm larvae of the genus *Echinococcus*. There are two important species, *E.granulosus* and *E.multilocularis*. *E.granulosus* occurs in Saudi Arabia and worldwide but is confined to areas where man, sheep or other intermediate hosts and dogs live in proximity, mainly in the Middle East, Australia, Iceland, and South America. *E.multilocularis* occurs in Europe, Siberia, Japan and Alaska. The intermediate host is mainly rodents, and the most common definitive host is the fox, as opposed to dog in *E.granulosus*. By *E.granulosus* man becomes infected following ingestion of eggs after contact with dogs or via contaminated foodstuffs. The liver is the most common site of hydatid cyst (60%-80%) since it is the major filter of portal blood. The lung is the next most frequent site (15%). Less commonly organs infected are spleen, kidneys, brain, and bones.

Patients and Methods

Commercially available units of General Electric Sonograph with 3.5 MHz transducer/real time sector-linear scanner were mostly used for ultrasonographic examinations of the liver. Siemens radiographic unit was used for the examinations of the chest. Radiographic diagnosis of hydatid disease in the chest was made in 20 patients. For the diagnosis of liver hydatid disease by ultrasound, 40 patients were evaluated in two year period at King Fahad Hospital, Saudi Arabia.

ZDENEK A. TUSEK, M.D.*

Our Lady of Lourdes Hospital, Norfolk, NE 68701

A final diagnosis was reached by surgery in most of the patients or by combination of Casoni's test and complement fixation test.

Results

Different radiographic patterns were seen in the lungs of 20 cases, mostly young women. In most of the cases a rounded, well defined and uniformly dense lesion of different size is seen. (Figure 1). If the cyst communicates with bronchial tree a cap of air may be seen (Figure 2). If the cyst ruptures, laminated membranes collapse and the membrane floating or residual fluid produces "water lily signs."^{1, 2, 3}

A variety of sonographic patterns were observed in the liver in 40 patients:

1) The most common presentation (60%) is a cyst-within-a cyst appearance or cart wheel or multilocular appearance by anechoic daughter cysts within a mother cyst.^{3, 4}

2) A complex cystic mass is seen as a rounded mass either predominantly cystic with irregular echo areas (Figure 5) or predominantly solid (Figure 6). All of them were infected.⁴ Sometimes a calcified rim is well visualized (Figure 7).

3) A single spherical cystic area was the least common presentation in this group. (Figure 8).

Discussion

Plain radiography is useful, especially in the chest with evidence of space occupying lesion in a patient with a history of close contact with dogs.³

An abdominal film may be useful in a patient

*Address for reprints: Dr. Z. A. Tusek, 1401 Cedar Ridge Rd., Norfolk, NE 68701.



Figure 1. A dense mass in the lower lobe of the right lung represented a large hydatid cyst.



Figure 2. Ruptured hydatid cyst in the lower lobe of the left lung with evidence of air in the cyst.

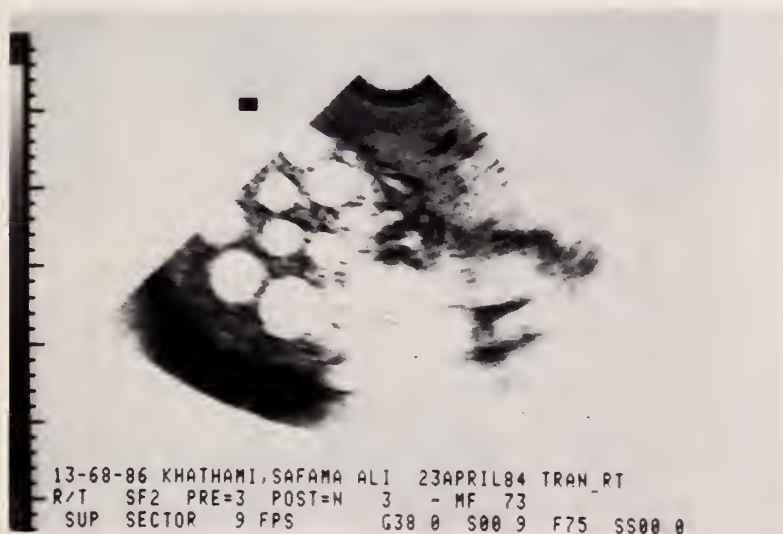


Figure 3. Hydatid cyst. Longitudinal scan of the liver shows daughters cysts with mother cyst.

with clinical hepatomegaly in an endemic area. The frequency of cyst calcification in the liver varies from 33-60%. Differential diagnosis will include calcification within a rare nonparasitic cyst, an old liver abscess, hepatoma, vascular malformation or intrahepatic gallstones.^{1, 5}

Ultrasound is of value differentiating hydatid cyst from other space occupying lesions because of its frequent characteristic appearance. Sonographic criteria of a hydatid cyst are daughter cysts, radiating dividing septa and demonstration of a surrounding capsule.⁴

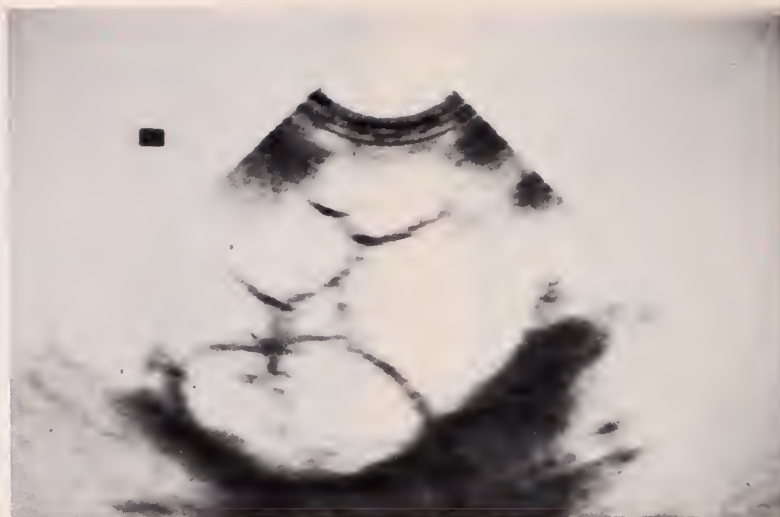


Figure 4. Hydatid cyst. Magnified transverse scan of the liver showing multilocular appearance of the daughter cysts.

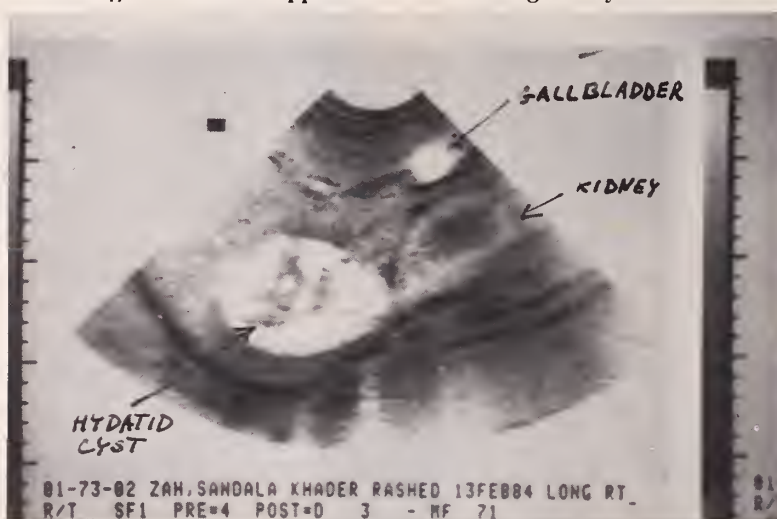


Figure 5. Hydatid cyst. Longitudinal scan of the liver reveals predominantly cystic mass with irregular echogenic areas.

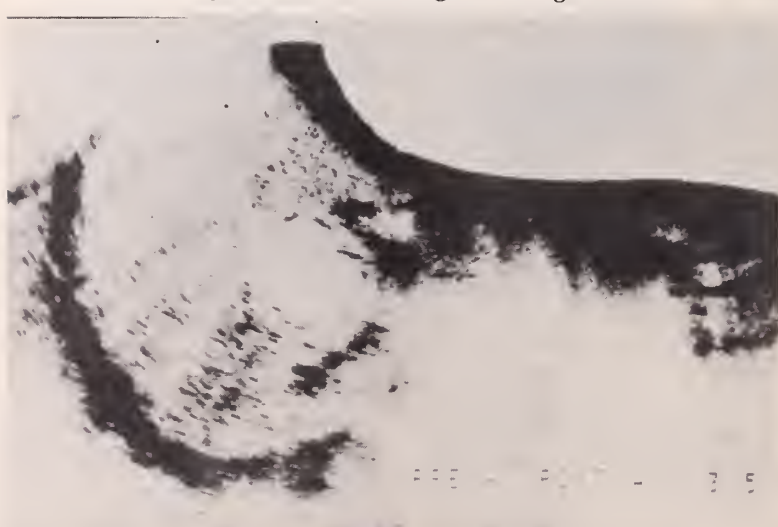
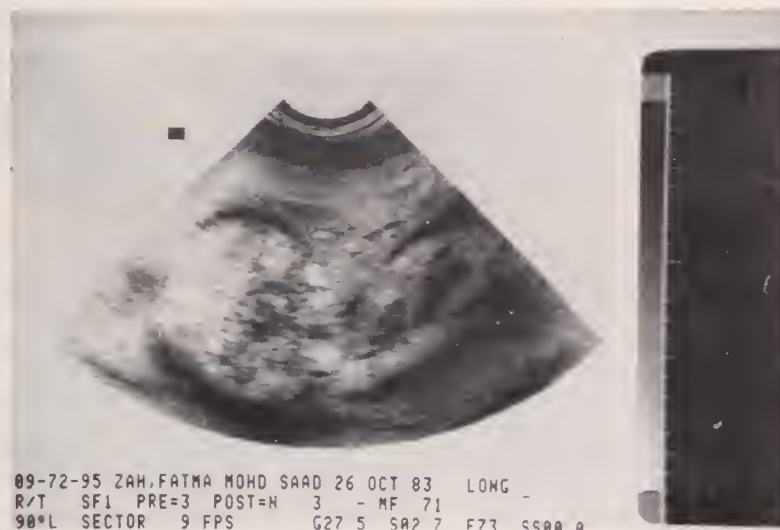


Figure 6. Hydatid cyst. Longitudinal scan of the liver with a single cystic, partially calcified area.

Figure 7.
Hydatid cyst.
Longitudinal
scan of the liver
shows
predominantly
solid lesion
representing
infected hydatid
cyst.



Figure 8.
Hydatid cyst.
Longitudinal
scan of the liver
with round-like
solid mass
surrounded by
rim of
echogenicity
representing
partially calcified
and infected
hydatid cyst.
Next to the cyst is
the right kidney.



Differential diagnosis will include hamartoma, teratoma, cystic hepatoblastoma, necrotic tumor, benign cysts, and abscess.

CT scanning can give valuable information regarding size and location. However, it is much more expensive. But it is examination of choice for intracranial hydatid disease.

Noncalcified cysts can also be visualized by nuclear isotope examination, angiography or magnetic resonance imaging.

Summary

Radiological and sonographic patterns of hydatid cyst disease were presented as seen in multiple patients in a general hospital in southwestern Saudi Arabia. This disease can also occur in the USA, especially in the lower Mississippi Valley.⁵ Because of increased

international travel and immigration, the Nebraska physician should be aware of possible hydatid cyst disease.

References

1. Reeder MM, Palmer PS: The Radiology of Tropical Diseases. Baltimore, London, Williams & Wilkins, 1981, pp 157-221.
2. Acta Universitatis Carolinae, Sehr A: The Radiology of Parasitic Diseases, Charles University, Prague, Ovocny trh 3, Prague 1, Czechoslovakia. pp 73-101, 1974.
3. Chiodini PL: Hydatid disease. *Medicine International*, pp 190-192, May 1984.
4. Hussain S: Diagnostic Criteria of Hydatid Disease on Hepatic Sonography. *Journal of Ultrasound in Medicine* 4: 603-607, November 85.
5. Reeder MM: Tropical Diseases of the Liver and Bile Ducts. *Seminars in Roentgenology*. Vol X, No 3/July, 1975, pp 233-236.

Cranial CT Atrophy in Multiple Sclerosis - An Aid to Diagnosis

THE diagnosis of Multiple Sclerosis may be established or confirmed on the basis of the characteristic cranial CT contrast enhanced or low density lesions.¹ The cranial CT appearance of atrophy alone may also be used as an aid in diagnosing Multiple Sclerosis. Previously, atrophy has been described as occurring in cases of chronic Multiple Sclerosis or rarely reported as developing over eight months in an especially fulminant case of Multiple Sclerosis.¹⁻³ The atrophy in cases of Multiple Sclerosis appears on serial cranial CT as progressive enlargement of CSF containing spaces to include ventricles, sulci, fissures, and cisternae, as illustrated by the following cases.²

Case Reports

CASE 1 — JS is a 33 year old female with documented exacerbating-remitting Multiple

JOHN F. AITA, M.D.*

Department of Neurology, University of Nebraska
Medical College, Omaha, Nebraska

*Address for correspondence: John F. Aita, M.D., 105 South 49th Street, Omaha, Nebraska 68132.

Sclerosis of seven years duration. In comparing her cranial CT of November 5, 1976 (Figure 1) with those of May 11, 1983 (Figure 2 and 3), one notes the interval development of atrophy with enlargement of cerebral sulci, ventricles, Sylvian fissures, quadrigeminal and superior cerebellar cisternae, velum interpositum.

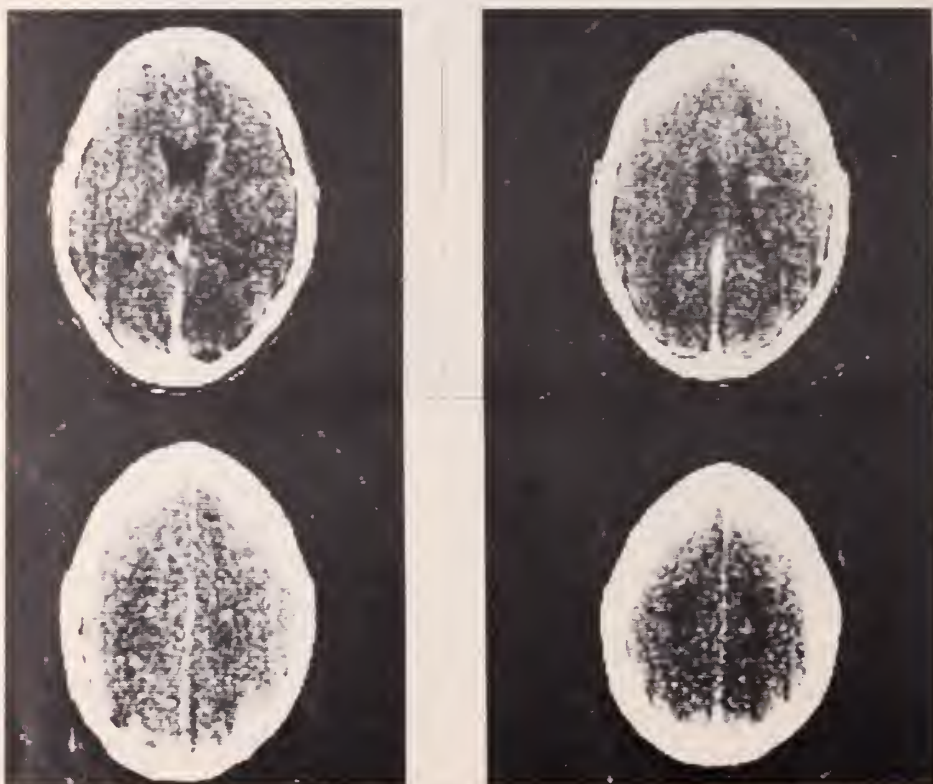


Figure 1 — Case 1: 11-5-76 - No atrophy.

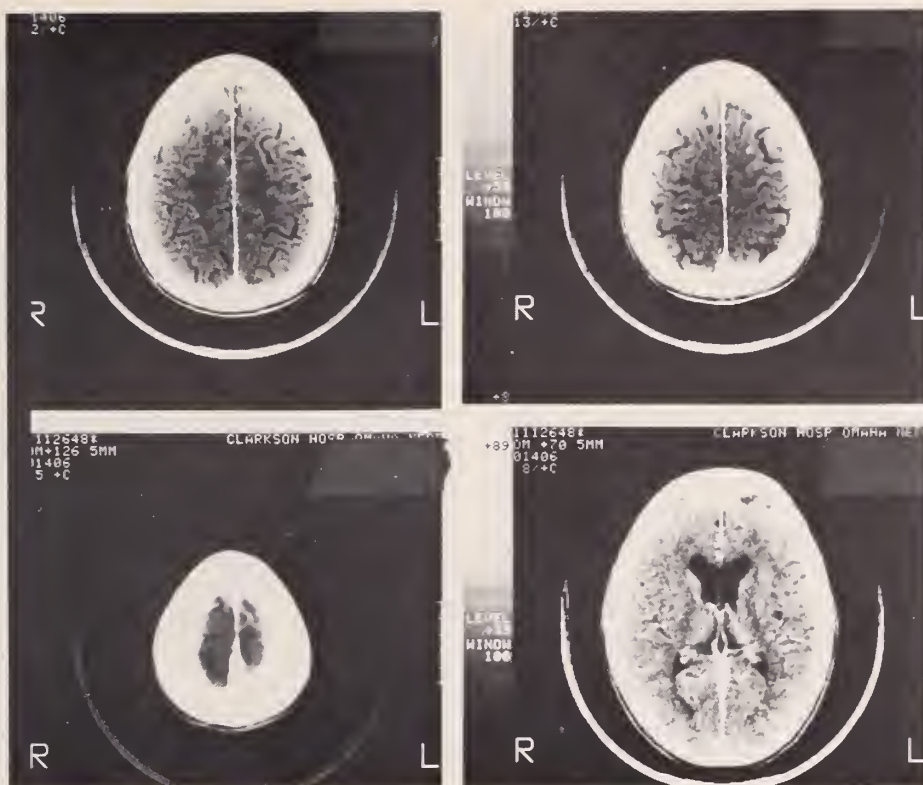


Figure 2

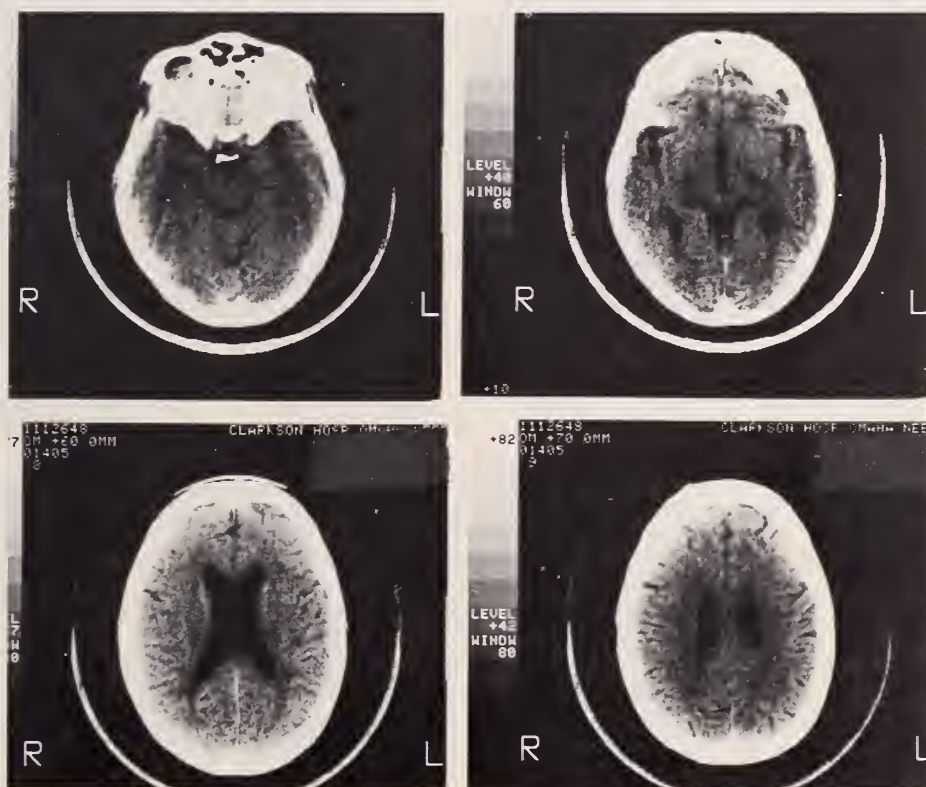


Figure 3

Figure 2 and 3 — Case 1:5-11-83 - Interval enlargement of cerebral sulci, ventricles, Sylvian fissures, velum interpositum, and cisternae (quadrigeminal, superior cerebellar).

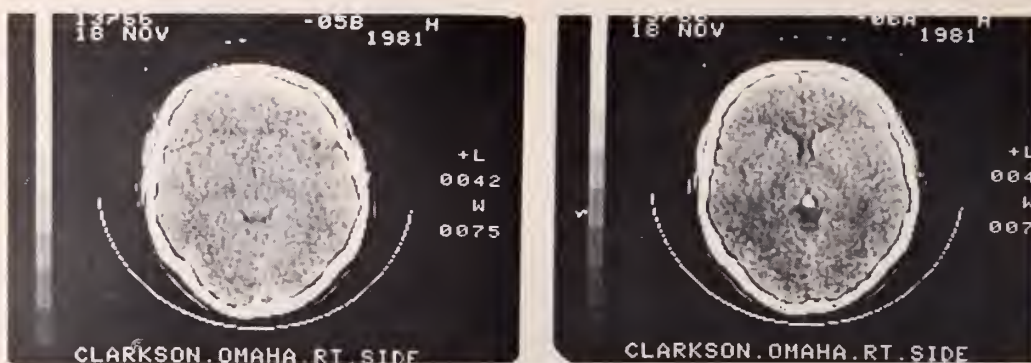


Figure 4

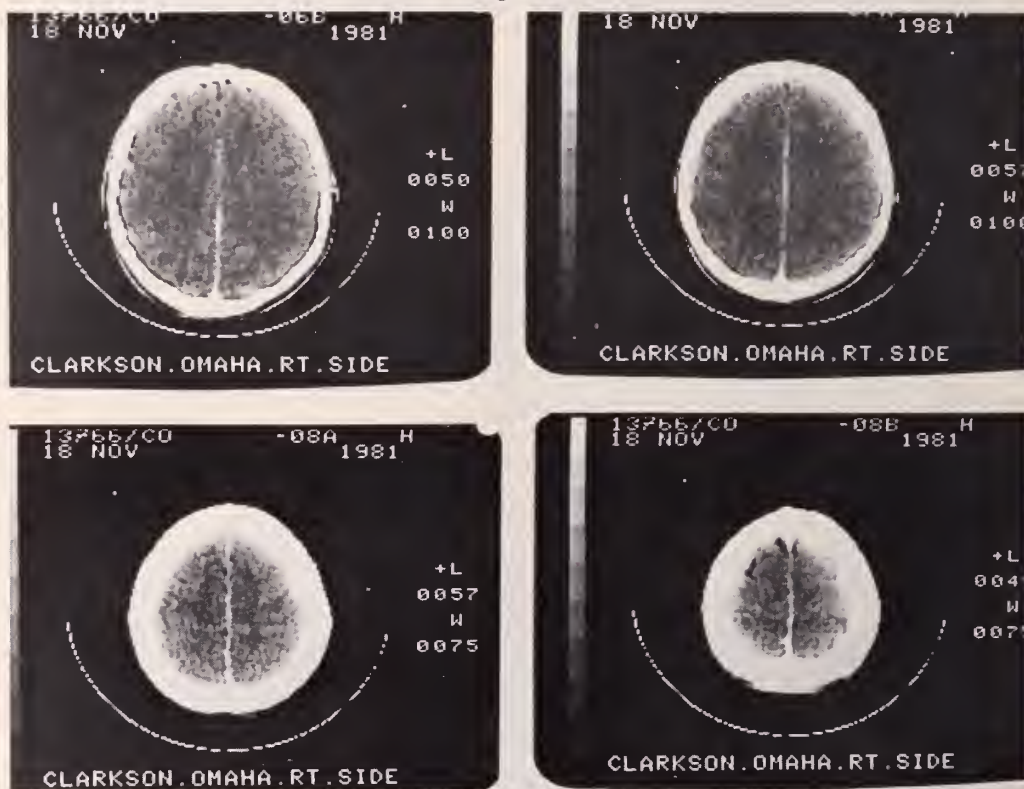


Figure 5

Figures 4 and 5 — Case 2:11-18-81 - Slight enlargement of velum interpositum.

CASE 2 — MZ, a 25 year old female with Multiple Sclerosis for two and one-half years (initially exacerbating-remitting, more recently chronic progressive), was found on her initial cranial CT of November 18, 1981 to have slight enlargement of the velum interpositum only (Figures 4 and 5). By the second cranial CT of March 3, 1985, she had developed interval enlargement of the quadrigeminal cistern, Sylvian fissures, and cerebral sulci (Figures 6 and 7).

CASE 3 — LG, a 38 year old female with chronic progressive Multiple Sclerosis of eighteen years duration, demonstrated progressive

atrophy over three and one-half years. Atrophy was noted on the CT of April 14, 1981 with an increase in size of the anterior interhemispheric fissure, velum interpositum, and cisternae to include quadrigeminal, retrothalamic, and superior cerebellar (Figure 8). Progressive atrophy was found on the cranial CT of November 13, 1984 with interval enlargement of both lateral ventricles, left Sylvian fissure, and cerebral sulci (Figure 9).

Discussion

The atrophy in Multiple Sclerosis develops as a result of both white matter loss from demyelination and white matter shrinkage

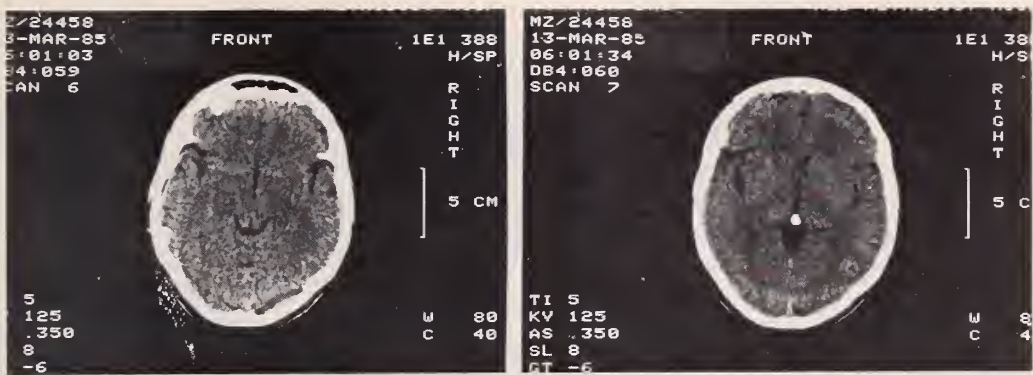


Figure 6

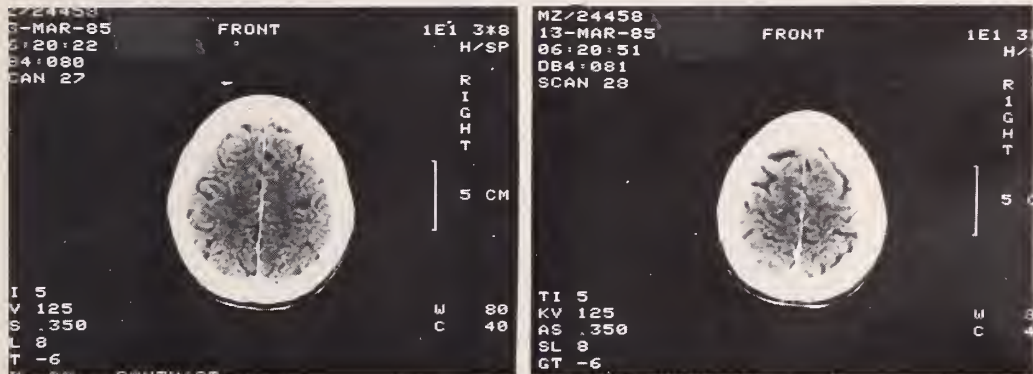
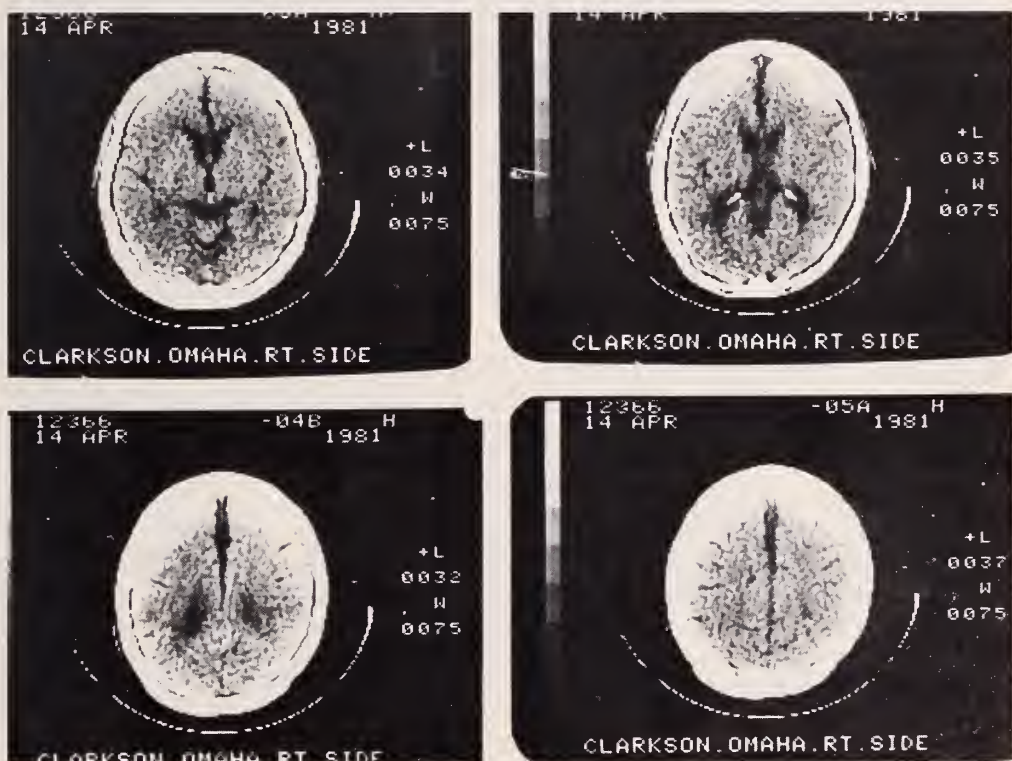


Figure 7

Figures 6 and 7 — Case 2:3-3-85 - Interval increase in size of quadrigeminal cistern, Sylvian fissures, and cerebral sulci.



Figures 8 — Case 3:4-14-81 - Atrophy with enlargement of anterior inter-hemispheric fissure, velum interpositum, and cisternae (quadrigeminal, retrothalam, and, superior cerebellar).

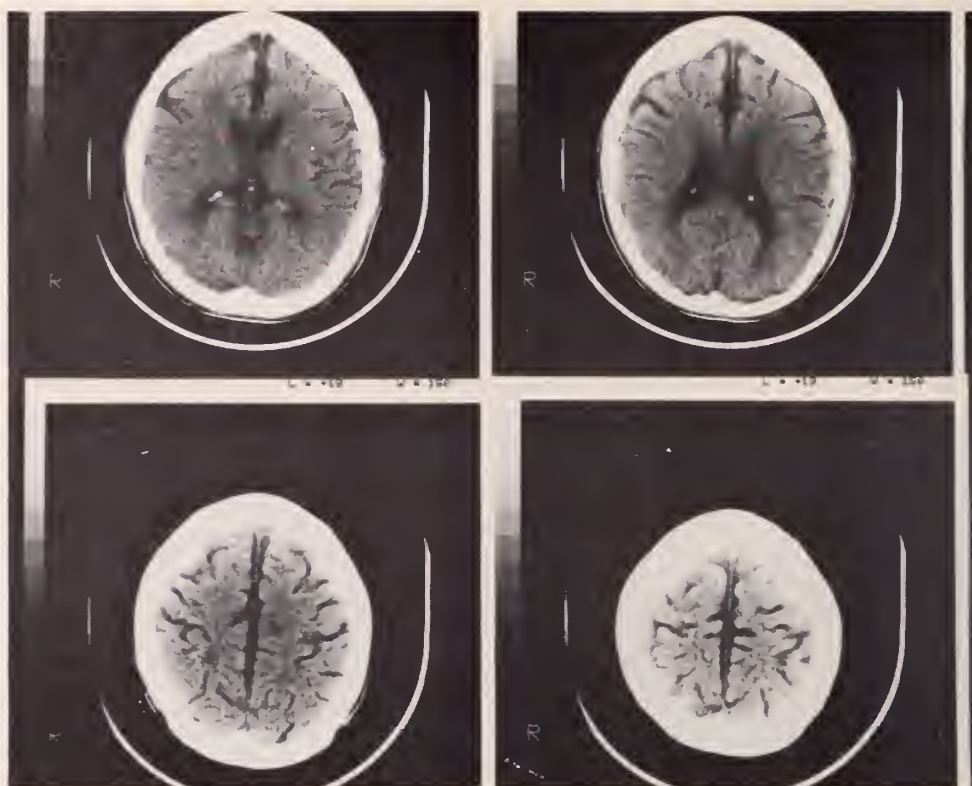


Figure 9 — Case 3:11-13-84 - Progressive atrophy with an increase in size of lateral ventricles, left Sylvian fissure, and cerebral sulci.

from gliosis.⁴⁻⁶ This atrophy is a continuous, dynamic, relentlessly progressive aspect of Multiple Sclerosis as seen with serial cranial CT. The cranial CT finding of atrophy, the development of atrophy or its progression in a patient with exacerbating-remitting or progressive neurologic disease should be considered a hallmark of Multiple Sclerosis. Conversely, the absence of atrophy or the lack of its development or progression over time with serial cranial CT studies in cases of exacerbating-remitting or progressive neurologic illness strongly argues against a diagnosis of Multiple Sclerosis.

Summary

The cranial CT finding of atrophy, the development of atrophy or its progression in a patient with exacerbating-remitting or pro-

gressive neurologic disease should be considered a hallmark of Multiple Sclerosis.

References

1. Aita JF: Cranial CT as an Aid in Diagnosis of Multiple Sclerosis. *Applied Radiology* 1981; 10:33-37.
2. Aita JF: Cranial Computerized Tomography in Chronic Multiple Sclerosis. *Nebraska Medical Journal* 1978; 63:372-374.
3. Lebow S, Anderson DC, Matri A, Larson D; Acute Multiple Sclerosis with Contrast-enhancing Plaques. *Archives of Neurology* 1978; 35:435-439.
4. Schneck S: Personal Communication.
5. Dublin W.B.: Hypersensitive Disease - Autoimmune Reactions, in Dublin W.B. (Ed): **Fundamentals of Neuropathology**, 172-208, Springfield, Illinois, Charles C. Thomas, 1967.
6. Greenfield JG, Norman RM: Demyelinating Diseases, In Blackwood W, McMenemey WH, Meyer A, et al (Eds): **Greenfield's Neuropathology**. 475-519, Edward Arnold, London, 1969.

Cranial CT Characteristics of Low-Density Multiple Sclerosis Regions of Sclerosis

MUCH has been written over the years about the contrast-enhanced and low density areas of Multiple Sclerosis as seen on cranial CT. The low density lesions of Multiple Sclerosis are of two types: areas of acute demyelination with tissue rarefaction and areas of sclerosis.¹ While both types of low density areas are found in periventricular and deep white matter,¹ only the regions of sclerosis have a characteristic appearance of 10-13 Hounsfield units, scollaped margins, lack of contrast-enhancement and edema, and remain relatively unchanged over time with regard to size, shape, density, and appearance, as seen in the present case report.

JOHN F. AITA, M.D.*

Department of Neurology, University of Nebraska Medical College, Omaha, Nebraska

*Address for correspondence: John F. Aita, M.D., Midwest Clinic, 105 South 49th Street, Omaha, Nebraska 68132.

Case Report:

GK, a 46 year old white female, has known Multiple Sclerosis of 28 years duration. In

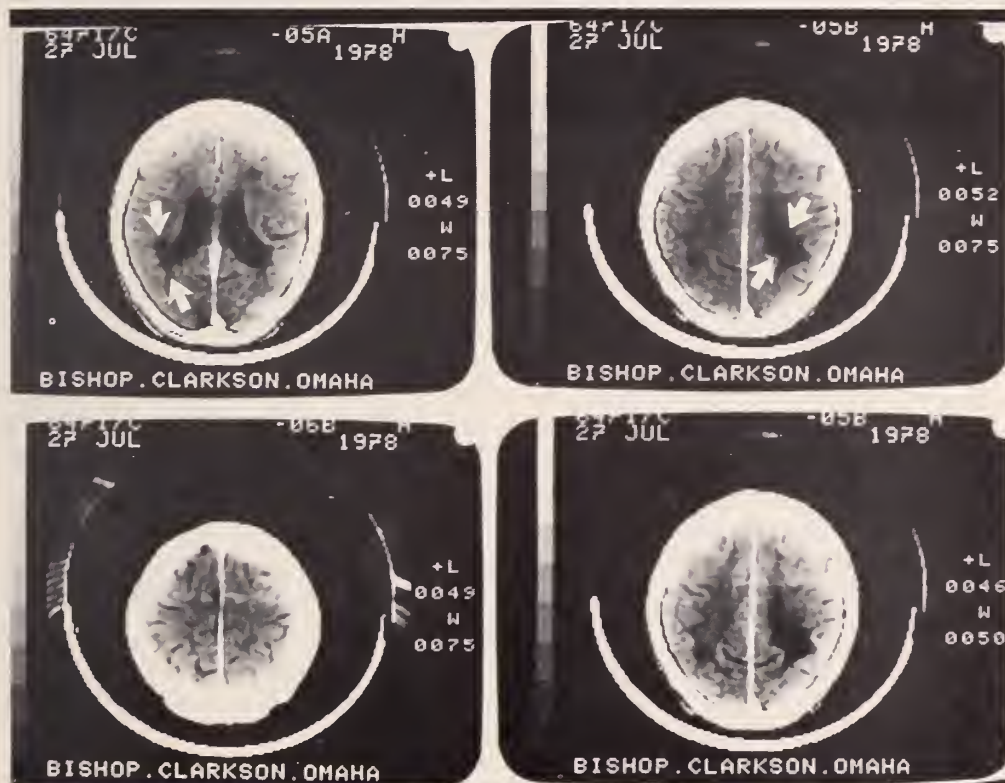


Figure 1A

Figure 1A (July 27, 1978) and 1B (April 26, 1984) — In addition to the atrophy, both studies demonstrate identical low density lesions: two adjacent to the left lateral ventricle posteriorly (10-13 Hounsfield units), one with scollaped borders just superior to the right lateral ventricle posteriorly (11 Hounsfield units).

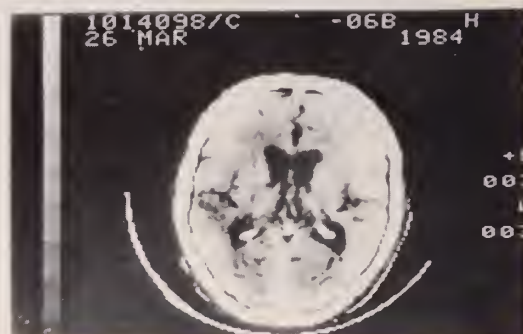
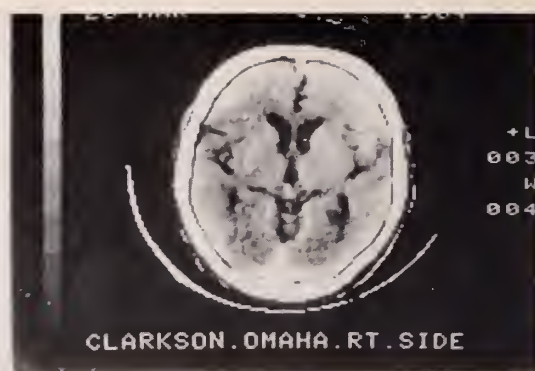


Figure 1B

comparing her two cranial CT studies of July 27, 1978 and April 26, 1984 (Figure 1A and 1B), one finds in addition to the atrophy, identical low density MS plaques: two next to the left lateral ventricle posteriorly measuring 10-13 Hounsfield units and a third with scollaped margins just superior to the posterior aspect of the right lateral ventricle measuring 11 Hounsfield units.

The scollaped margins of these regions of sclerosis probably result from white matter shrinkage secondary to the underlying gliosis. From a neuropathologic standpoint, one would expect this sclerosis to remain relatively static, once formed, as regards size, shape, CT density and appearance. Contrast-enhancement and edema of these areas neither would

be expected nor do they occur because of the absence of both neovascularity and a change in vascular permeability.

Summary

The low density areas of sclerosis found on the cranial CT studies of MS patients have a characteristic appearance of 10-13 Hounsfield units, scollaped margins, lack of contrast enhancement and edema in the periventricular and deep white matter and remain unchanged over time in size, shape, density and appearance on cranial CT studies.

References

1. Aita JF: Cranial CT as an Aid in Diagnosis of Multiple Sclerosis. *Applied Radiology*. 1981, 10:33-37.

Wordy Surgery

WHILE reviewing operative reports for a large insurance company and also as a member of several hospital surgical committees, I collected examples of sentences in these reports which should encourage surgeons to review their transcribed reports or to dictate them with greater attention and care. Of course, it is recognized that sentence structure and thoughts during dictation may be somewhat disorganized and that errors by some transcription typists inevitably occur. These are identified on careful review of the written report and subsequent correction. The following list of sentences were copied verbatim from operative reports:

Suction drains were placed in **both necks** (a two-headed patient?).

Hemostasis was achieved with the Valley Lab electrocautery (advertisement?).

Care was taken going through the skin and subcutaneous tissues because the patient had prior surgery (would less care have been taken if the patient had not had prior surgery?).

A straight midline incision was made with a **sharp** knife (would you use a dull knife?).

A nasogastric tube was placed through the **right** nose (two noses?).

The operation was postponed until **digital** toxicity was stabilized (a computer disease?).

Operative findings — a **small** grapefruit sized hematoma — then later in the report — the **large** hematoma was evacuated (was it large or small?).

Was called to examine the patient in consultation who was up on the **5th** floor (would there have been a difference if on the 6th floor?).

The operating microscope was present in the next room but was not needed for this case (a typewriter is also present in the next room — so?).

Under adequate or satisfactory anesthesia by Dr._____, (if the anesthesia was inadequate or unsatisfactory it would have been mentioned and the anesthesiologist's name should have been listed in the operative report, so why repeat it?).

HARRY PERELMAN, M.D., F.A.C.S.*
Rancho Mirage, CA 92270

The appendix is not identified and not removed (how could it be removed if they couldn't find it?).

Markings were scratched on the skin with a **22** gauge needle. The skin incision was made first with the **15** and **10** scalpel. Tissue was cut with a **Mayo** scissors (or a **Metzenbaum** scissors) or a **#15 Bard-Parker** blade was used (do the names or numbers really contribute to the surgical procedure?).

The dura was replaced and covered by two sheets of **sterile** Gelfoam (does anyone use unsterile Gelfoam?).

However, prior to sterile draping and prepping of the patient, a fly was noted in the operating room, which was caught and disposed of (this! in an operative report?).

I once received a letter from a travel group sponsor requesting I prepare a **short** 5 minute talk on a specialty topic (how long is a lengthy 5 minute talk?) This is much like the **short** one inch incision reported by some surgeons.

Similar examples of redundant language or poor choice of words can be found in the operative reports of most hospitals.

Lois DeBakey and Selma DeBakey are professors of scientific communication at Baylor College of Medicine and experts in language and its uses. They teach medical students, physicians and others proper language usage. Doctors and other professionals tend to write and talk with verbosity, redundancy and big words — a gobbledegook the DeBakeys have labeled medicant. They define medicant as the use of obscure, pompous, ambiguous words and convoluted phrases that

*Reprint requests to Harry Perelman, M.D., 10 Mt. Holyoke Drive, Rancho Mirage, CA 92270

frequently hide fuzzy thinking or ignorance. The DeBakeys decry euphemisms rather than plain language and faulty or omitted punctuation:

Euphemistic		Preferred
demise	instead of	death
expired	instead of	died
respire	instead of	breathe
sacrificed	instead of	killed
mixologist	for	bartender
mortician	for	undertaker
cosmetologist	for	hairdresser

Punctuation helps the reader group words for easier interpretation and can alter meaning critically as shown in the following examples:

The doctor left her convinced she was about to die (patient was resigned).

The doctor left her, convinced she was about to die (doctor was resigned).

She was a **pretty sick** patient (rather ill).

She was a **pretty, sick** patient (attractive and ill).

The psychiatrist **thought the patient was psychotic**.

The psychiatrist, thought the patient, was psychotic.^{1, 2, 3}

Lois DeBakey summarized the problem stating that not all physicians and scientists can become skillful writers, but all can learn to write clearly, accurately and intelligently.⁴

Summary

Redundant verbosity in medical reports is to be avoided. Proper language usage and correct punctuation is advised. Surgeons are cautioned to write and dictate with greater care and to review their reports because of dictation errors or typist transcription errors.

(This study was supported by a grant from Westside Hospital, Los Angeles, CA 90036.)

References

1. DeBakey L, DeBakey S: Medicant. Forum on Medicine 1: 38-40, 42-43, 80-81, 83-86, April 1978.
2. DeBakey L: Language and the Physician. Arch Surg 92: 971, 1966.
3. DeBakey L: Every Careless Word That Men Utter. Anesthesia and Analgesia 49: 830-831, 1970.
4. DeBakey L: Instruction in Scientific Communication. The Journal of Medical Education 40:928, 1965.

President's Page

CHANGING MEDICAL EDUCATION

I recently had the pleasure of attending a family reunion of my wife's family. Her family is small with a relatively high number of physicians. This family reunion consisted of 40 people of three generations. My wife, her sister and brother and their spouses being the senior generation at this reunion.

However, the history of physicians in this family goes back three generations before. Their great-grandfather was a physician who practiced in Indianola, Iowa. He served during the Civil War as a hospital steward and obtained his medical education by preceptorship. The exact history of his education is not entirely substantiated. There is a family story that he attended Rush Medical School, but on checking the records at Rush, there is no record of his having attended there, however, we are not sure but what they may have just checked graduates. At least he did not graduate from Rush Medical School. We have a confirmed record of his practicing in Indianola in April of 1875 as indicated on his application for disability due to "chronic diarrhea". It is known that he died of a complication of ulceration of the "bowel".

The father of the present senior generation, grandson of the Civil War physician, was a general practitioner in northwest Nebraska (Harrison and Crawford). He attended Creighton University Medical School having entered medical school directly after graduating from Omaha Central High School. He did not attend a university or take any pre-medical education before entering medical school. His medical education predated the revolution of medical education brought about by the Flexner Report and consisted of lectures and demonstrations. There was no practical experience, no hands-on education as we know it today. He graduated from Creighton University Medical School in 1908 and entered practice immediately in 1908, again, with no practical experience, no internship, no residency program. Following two years of general practice at Harrison, Nebraska, he felt the need for further practical education and spent a year in



L. Dwight Cherry, M.D.

Vienna taking what we would consider a concentrated, rotating internship. The professors were very poorly paid and the various students, largely from America, would hire them to supplement the structured course with special lectures and demonstrations in the evening. My wife has many of the notes that her father took in both the formal and informal lectures in Vienna.

The physicians in the present senior generation consists of a retired, orthopedist/oncologist at the Mayo Clinic and myself, a retired general surgeon in Lincoln, Nebraska. Our medical education consisted of a very structured, prescribed course in medical school, the first two years being lectures, laboratories and demonstrations in basic science with little or no correlation to clinical medicine. There were no electives and this consisted really of an extension of our pre-med years at the University. Our second two years of medical school consisted of didactic lectures and teaching on the hospital wards, in the operating room, in the delivery room, and in the clinics, again with no electives. After medical school graduation, we both served an internship and then a residency in our respective fields. We were into this post-graduate education process before we had a choice of course of study.

The middle generation consists of a general surgeon in private practice in Lincoln, Nebras-

ka, a urologist and an obstetrician/gynecologist, both in private practice in Minneapolis, Minnesota, and an invasive cardiologist at the Mayo Clinic in Rochester, Minnesota, varying in age from the late 30s to 50 years of age. The medical education of these four physicians consisted of the intensive courses in the basic sciences as the senior generation had, but combined with these courses were many correlation clinics and demonstrations and the introduction to clinical medicine, thus, stimulating the student in these basic sciences to realize why they are necessary and thus, stimulating his curiosity as to how he may use them in the future. Some electives were introduced at this level. The last two years of medical school of this generation consisted of the extensive clinical experiences on the wards, in the clinics, in the operating room, in the delivery room, and in physicians' offices, with much choice of electives, particularly in the senior year. There was even a choice as to whether one should go to school the year around and graduate in three calendar years or to follow the more usual system of four

calendar years for graduation. The high-tech visual and auditory aids and computer teaching techniques were used extensively, thus adding to the wide academic experience.

As I sat on the terrace overlooking the pool watching the heads bobbing as they were having much fun, I wondered if any of the youngest generation would pursue the medical profession. This generation consisted of children from age 4 through young adults, the oldest being a senior in college. Should any of this generation pursue the medical profession, one can only speculate as to the nature and structure of their medical education. Certainly, it will be different as medical education has evolved through the centuries. I feel that it will be as different from the education of the present practicing physician as his training differed from that of the preceptorship model as illustrated by the great-great grandfather who practiced in the Civil War and afterwards.

L. Dwight Cherry, M.D.
President



The Auxiliary

NMA Auxiliary members are faced with new challenges each year as we volunteer in our communities. This year is no exception.

The American Medical Association has asked us to "step up our efforts" in the area of adolescent health by joining them in their Adolescent Health Initiative, an ongoing, comprehensive plan for helping teens grow into healthy adults. In response to this request, 1987-88 AMA Auxiliary President Betty Szewczyk (Mrs. Edward) is asking every county auxiliary in the country to plan at least one adolescent health project.

To ensure that doctors are accorded the "right to practice medicine in the high standard that their patients have come to expect," Mrs. Szewczyk further urges each local auxiliary unit to plan at least one program to educate and involve their members in legislative action. With an election year approaching, the importance of this request is very clear.

The Nebraska Medical Association has long recognized the achievements of our Auxiliary. During their annual meeting in April, 1987, the House of Delegates noted that the Auxiliary "is doing an exemplary job and deserves all the support the NMA can give it." Dr. L. Dwight Cherry, President, said in a letter of commendation, "We commend you for your diligence and the many successes achieved by the NMA Auxiliary."

With this support in mind, it should be an easier task to face the challenges in our communities this year, to promote and implement the programs necessary to ensure good health and health care, to involve our members in legislative action, and to continue the fund raising efforts necessary on a local as well as state and national level.

The NMA Auxiliary is a team of over 800 volunteers committed to our physicians spouses and to our communities. The officers and committee chairmen have accepted active roles in this organization and have the resources to help plan and execute projects. Please, ask for their help and share your ideas with other members. Together, we have a strong organization that can make things happen.

* * *

FALL AUXILIARY MEETING —

Our Fall Auxiliary Meeting will be held on Wednesday, September 23, 1987, at the Riverside Country Club in Grand Island. Coffee will be served at 9:30 a.m., with the meeting beginning at 10:00 a.m. Following lunch, Dr. Robert Manley, historian at the Stuhr Museum, will present an enlightening and entertaining program on the "History of Medicine and Physicians."

All members of the Auxiliary are welcome and state and county officers and chairmen are expected to present a brief report. Plan to attend and learn what is happening in our organization!

* * *

TRAVELING ACROSS THE STATE —

Once again the State Officers will be traveling across the state during the month of September to visit as many county auxiliaries and members-at-large as possible. We are looking forward to explaining state projects, sharing news from National, and hearing your ideas and concerns.

Colleen Adam
President, NMAA

AMERICAN MEDICAL ASSOCIATION NEWS

POPULAR AMA WORKSHOP EXPLAINS HOW TO OBTAIN FAIR REIMBURSEMENT

"Insurance Processing and Coding for the Medical Office," an AMA workshop, helps physicians ensure that they receive fair reimbursement from third-party payors.

Designed for medical office staff and business managers, this valuable, one-day workshop helps participants acquire a working knowledge of Current Procedural Terminology through "hands-on" practice. Participants will also learn important facts about third-party payors, and methods of efficiently tracking outstanding claims. Workshop participants will receive a copy of the "Insurance Processing and Coding" workbook which contains many helpful forms and charts, and a current edition of the CPT-4 coding manual at no additional charge.

The workshop is conducted by staff of the AMA's Department of Practice Management, whose lively teaching style and indepth knowledge of medical practice management has helped make Practice Management workshops popular among physicians and medical office staff nationwide.

The workshop will be conducted from 8:30 AM to 4:30 PM in Omaha, NE on September 23. Fee is \$175 for AMA members, \$195 for nonmembers, and includes refreshment breaks and workshop materials.

To register, or for more information, call the AMA Practice Management Registrar collect at (312) 645-4958, or write to the American Medical Association Department of Practice Management, 535 N. Dearborn Street, Chicago, IL 60610; Attn: Registrar.

AMA WORKSHOPS HELP OFFICE STAFF WITH COLLECTIONS PROCEDURES

"Medical Collection Management" a workshop offered by the AMA's Department of Practice Management, teaches medical office staff effective methods of collecting outstanding bills.

This intensive half-day workshop helps participants tackle the sensitive issues associated with medical collections. The participant will learn practical techniques that can be applied to many difficult situations, including what to do with consistently delinquent patients. In addition, participants learn to develop an effective collections system, and are briefed on state and Federal collections laws. Also included are valuable workshop materials that can be put to use in any practice setting.

The workshop is conducted by staff of the AMA's Department of Practice Management, whose lively teaching style and indepth knowledge of medical practice management has helped make Practice Management workshops popular among physicians and medical office staff nationwide.

The "Medical Collection Management" workshop will be conducted from 8:30 AM to 12:00 PM in Omaha, NE on September 24. Fee is \$125 for each workshop for AMA members, and \$135 for nonmembers, and includes refreshment breaks and workshop materials.

To register, or for more information, call the AMA Practice Management Registrar collect at (312) 645-4958, or write to the American Medical Association Department of Practice Management, 535 N. Dearborn Street, Chicago, IL 60610; Attn: Registrar.

AMA WORKSHOPS HELP OFFICE STAFF WITH CODING PROCEDURES

"Advanced CPT-4 Coding", a workshop offered by the AMA's Department of Practice Management, teaches medical office staff proven methods of processing insurance claims forms for quicker reimbursement.

This valuable half-day workshop increases participants' CPT-4 coding competency through use of rigorous case studies and exercises. Participants also learn how to avoid common coding errors, and develop a customized coding system for their office. For maximum benefit from this workshop, it is suggested that participants have a working knowledge of CPT-4 coding through either the AMA's "Insurance Processing and Coding"

workshop, or through their own working experience in coding.

The workshop is conducted by staff of the AMA's Department of Practice Management, whose lively teaching style and indepth knowledge of medical practice management has helped make Practice Management workshops popular among physicians and medical office staff nationwide.

The "Advanced CPT-4 Coding" workshop will begin at 1:30 PM and conclude at 5:00 PM in Omaha, NE on September 24. Fee is \$125 for each workshop for AMA members, and \$135 for nonmembers, and includes refreshment breaks and workshop materials. Current CPT-4 books will be available for sale at the workshops.

To register, or for more information, call the AMA Practice Management Registrar collect at (312) 645-4958, or write to the American Medical Association Department of Practice Management, 535 N. Dearborn Street, Chicago, IL 60610; Attn: Registrar.

AMA WORKSHOP TEACHES EFFECTIVE BUSINESS MANAGEMENT

"The Business Side of Medicine: Increasing Office Efficiency," is an AMA workshop designed to help participants make their practices

more cost effective through review of basic office policies and procedures.

Geared toward medical office managers, this intensive, one-day workshop gives participants the tools they need to create and manage a well-run practice. The workshop covers personnel management including motivating current employees and hiring new ones; financial management including setting up a collections schedule and tips on proper insurance claim submission; and improving patient relations through the use of proper telephone etiquette and efficient appointment scheduling.

The workshop is conducted by staff of the AMA's Department of Practice Management, whose outstanding teaching style and indepth knowledge of medical practice management has helped make Practice Management workshops popular among physicians and medical office staff nationwide.

The workshop will be conducted from 8:30 AM to 4:30 PM in Omaha, NE on September 25. Fee is \$175 for AMA members and their office staff, and \$195 for nonmembers, and includes refreshment breaks and workshop materials.

To register, or for more information, call the AMA Practice Management Registrar collect at (312) 645-4958, or write to the American Medical Association Department of Practice Management, 535 N. Dearborn Street, Chicago, IL 60610; Attn: Registrar.

Coming Meetings

NMA FALL SESSION — September 10-12, 1987, Cornhusker Hotel.

NMA ANNUAL SESSION — April 29-May 2, 1988, Omaha Marriott.

NMA FALL SESSION — September 22-24, 1988, Cornhusker Hotel.

UNIVERSITY OF NEBRASKA MEDICAL CENTER

UNIVERSITY OF NEBRASKA COLLEGE OF MEDICINE ALUMNI ASSOCIATION — ALUMNI COCKTAIL RECEPTION — Tuesday, September 15, 1987, 5:30 to 7:00 p.m. — Fairmont Hotel, San Francisco, Calif. — in conjunction with the American Academy of Family Physicians meeting. All alumni, spouses and friends are invited. Hors D'oeuvres and Cash Bar.

EMERGENCY MEDICINE REVIEW — September 21-26, and October 5-10, 1987 at the Center for Continuing Education, UNMC, Omaha, NE 45 hours of ACEP Category I credit and 45 prescribed hours by the AAFP and AMA Category I.

UNIVERSITY OF NEBRASKA COLLEGE OF MEDICINE ALUMNI ASSOCIATION — ALUMNI ROUNDUP AND RECEPTION in Omaha — Monday, October 26, 1987, 6-7:30 p.m., Red Lion Inn Ballroom — in conjunction with the Omaha Mid-West Clinical Society Postgraduate Assembly. Hors D'oeuvres and Cash Bar. All alumni, spouses, faculty, friends and students are cordially invited. Followed at 7:45 p.m. with 50-year Dinner honoring the CLASS of 1937 - Nebraska Room, Red Lion Inn. CLASS REUNIONS will be held October 25 and October 27 for classes ending in "7" and "2".

For further information or to register for the above courses contact: Marge Adey or Brenda Ram, Center for Continuing Education, University of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, Nebraska 68105. Telephone (402) 559-4152.

UPCOMING UNMC CONTINUING EDUCATION COURSES

ADVANCED TRAUMA LIFE SUPPORT — March 23-24, May 28-29, September 28-29, 1987. Omaha, Nebraska. Fee: \$475. 17.0 Hours AMA Category I. 17.0 Prescribed Hours AAFP. 17.0 Hours ACEP Category I. For further information on these three courses contact Cindy S. Hanssen, University of Nebraska Medical Center, Center for Continuing Education, 42nd & Dewey Avenue, Omaha, Nebraska 68105-1065. Phone (402) 559-4152. In Nebraska, call: 800-228-1095. All other states, call: 800-228-9630.

For further information, contact Ann Fitzgerald, University of Nebraska Medical Center, Center for Continuing Education, 42nd & Dewey Avenue, Omaha, Nebraska 68105-1065. Phone (402) 559-4152. In Nebraska, call: 800-228-1095. All other states (except Alaska), call: 800-228-9630.

CREIGHTON UNIVERSITY

FAMILY MEDICINE UPDATE — September 5-6, 1987, The Lodge at Okoboji, Fee: TBA. Credit Hours: TBA.

AMERICAN MEDICAL WOMEN'S ASSOCIATION REGIONAL CONFERENCE — September 19-20, 1987, Holiday Inn Central, Omaha, Nebraska. Program Coordinator: Rose Faithe, M.D. Fee: TBA, Credit Hours: TBA.

A DAY WITH THE PERINATOLOGISTS — September 25-26, 1987, Red Lion Inn, Omaha, Nebraska. Program Director: Washington C. Hill, M.D. Fee: TBA, Credit Hours: TBA.

CONTROVERSIES AND CLINICAL MANAGEMENT IN HIGH RISK OBSTETRICS — October 29-31, 1987, Claremont Resort Hotel, Oakland, California. Program Director: Washington C. Hill, M.D. Fee:

\$350 for physicians, \$240 for nurses and residents if paid before Sept. 29. 16.5 credit hours Category 1.

VISITING PROFESSOR SCHEDULE — 1987

September 11-12, 1987

John Cameron, M.D., Surgeon-in-Chief, The John Hopkins University, Department of Surgery, Baltimore, Maryland.

October 23-24, 1987

Hiram C. Polk, Jr., M.D., Professor and Chairman, Department of Surgery, University of Louisville, School of Medicine, Louisville, Kentucky.

For further information or to register, contact: Creighton University School of Medicine Division of CME, Omaha, NE 68178, 402-280-2550 or outside Nebraska Toll free 800-228-7212, Ext. 2550. The Creighton University School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.

UNIVERSITY OF KANSAS

For information concerning the following continuing education offerings sponsored by the University of Kansas Medical Center contact: Carole Rosen, Promotions Coordinator, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Boulevard, Kansas City, KS 66103 (913) 588-4480.

NUTRITION CONCERNS FOR WOMEN: A SYMPOSIUM FOR HEALTH PROFESSIONALS — September 25, 1987. Sponsored by the University of Kansas Medical Center, Kansas City, Kansas. Credit: AMA, AAFP, CNE, ADA. Contact: Eileen Buttron, University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103, (913) 588-4480.

ALLERGY, IMMUNOLOGY AND RHEUMATOLOGY: REVIEW AND UPDATE — October 9-10, 1987 at the University of Kansas Medical Center. Sponsored by the

University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103. Credit: Category I AMA, AAFP. Contact: Eileen Buttron, University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103, (913) 588-4480.

MEDICINE AND RELIGION: ISSUES IN THE EIGHTIES — October 20-21, 1987 to be held at Kansas City, Kansas. Sponsored by University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103. Credit: AMA, AAFP, CNE, SW, Clergy. Contact: Eileen Buttron, University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103, (913) 588-4480.

UNIVERSITY OF COLORADO SCHOOL OF MEDICINE Summer and Fall 1987

FAMILY PRACTICE REVIEW — October 5-10, 1987, Denver, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

LANCASTER COUNTY MEDICAL SOCIETY

"CLINICAL UPDATE-III" PROGRAM SHEET — Saturday, November 14, 1987. Sponsored by the Lancaster County Medical Society, Bryan Memorial Hospital, Lincoln General Hospital and St. Elizabeth Community Health Center. There will be a variety of topics with many different doctors covering each topic. Located at the Nebraska Center for Continuing Education, 33rd & Holdrege Street, (Phone 472-3435) Lincoln, Nebraska. There is no registration fee, but to obtain a registration form contact: P.D. Duensing, Ed.D., Executive Secretary, Lancaster County Medical Society 2966 "O" Street - Lincoln, NE 68510.

**NATIONAL JEWISH CENTER FOR
IMMUNOLOGY AND
RESPIRATORY MEDICINE**

NATIONAL JEWISH CENTER FOR IMMUNOLOGY AND RESPIRATORY MEDICINE KEYSTONE SUMMIT — February 3-7th, 1988 at Keystone Colorado. A tribute to: Richard Farr, M.D. Topics: Allergy, Asthma, Pharmacology, Advances in Immunology, Diagnostic Testing and more. Registration fee: \$325.00 — \$165.00 for Allied Health and Physicians in Training. 16.5 hours of AMA Category 1 Credit. For brochure and more information contact: Jeri

Wagner, National Jewish Center for Immunology and Respiratory Medicine, 1400 Jackson Street, Denver, CO 80206, 303-398-1000.

SCHEDULED MEETINGS

55TH ANNUAL POSTGRADUATE ASSEMBLY OMAHA, MID-WEST CLINICAL SOCIETY — October 26, 27 and 28, 1987 Red Lion Inn, Omaha. For information please contact: Lorraine E. Seibel, Executive Secretary, Omaha Mid-West Clinical Society, 7363 Pacific Street, Suite 205-B, Omaha, Nebraska 68114.

Motrin[®] 800 TABLETS mg

ibuprofen

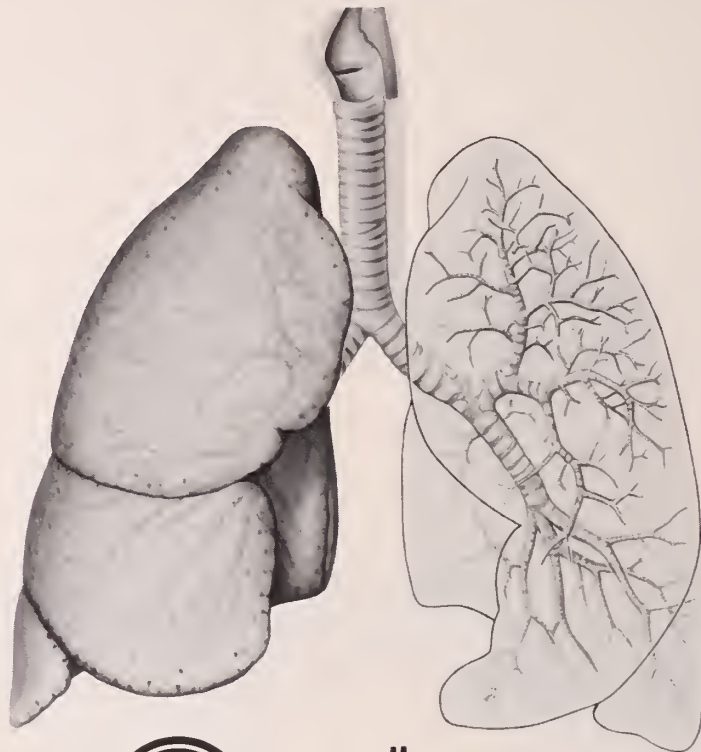


Extra strength
Convenience
Economy



A Century
of Caring
1886-1986

Consider the causative organisms...



Ceclor[®]
cefaclor

250-mg Pulvules[®] t.i.d.
offers effectiveness against
the major causes of bacterial bronchitis

Haemophilus influenzae, Streptococcus pneumoniae
(ampicillin-susceptible and ampicillin-resistant)

Note: Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

Ceclor[®] (cefaclor)

Summary. Consult the package literature for prescribing information.

Indications: Lower respiratory infections, including pneumonia, caused by susceptible strains of *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A β -hemolytic streptococci).

Contraindication:
Known allergy to cephalosporins.

Warnings:
CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients. Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:

- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)
Therapy-related adverse reactions are uncommon. Those reported include:

- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] or the above skin manifestations accompanied by arthritis/arthritis and, frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness,

insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.

- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology

- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest[®] tablets but not with Tes-Tape[®] (glucose enzymatic test strip, Lilly).

[072886R]

PA 8794 AMP

©1987, ELI LILLY AND COMPANY



700241

Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285.

Eli Lilly Industries, Inc.
Carolina, Puerto Rico 00630

The complete journal for family practice physicians

- Reaches 79,000 family physicians monthly
- Presents the most commonly seen patient problems in family practice
- Written by physicians for physicians
- The most current clinical updates in:

Cardiology	Ob/Gyn
Diabetes	Psychiatry
Pediatrics	Gastroenterology
- Provides 20 hours of CME Category 1 Credit

PRACTICAL • CLINICAL • EDUCATIONAL • CURRENT



AMA News Notes

(continued from page 13-A)

Board-Certified or Board-Eligible Radiologists, and 3) an outright prohibition against the implementation of RAP DRGs.

While the AMA is still adamantly opposed to the development of separate Relative Value Scales for individual specialty societies and will continue to seek elimination of these in the Budget Conference, the results from Energy and Commerce are gratifying.

In addition, the Energy and Commerce Committee amended an onerous MAAC base period provision to allow physicians who performed a procedure prior to April 1, 1984 but had no charges for that procedure submitted during April-June 1984 to obtain a full MAAC for 1988. Currently, those physicians are being penalized by a rollback to a MAAC calculated at 50% of the prevailing rate. Also, the base period for 1989 MAACs will be moved up to the 12 month period ending June 30, 1986.

Further, the Committee has included a PRO provision which prevents the implementation of a PRO sanction until a physician has obtained an administrative law hearing PROVIDED there is NO finding by the Administrative Law Judge that the physician poses a serious risk to patients.

* * *

The AMA is assisting a patient advocate group as part of its support for efforts to ensure the availability of animals for research. The Incurably Ill for Animal Research (iiFAR) was founded last year in Arizona by two patients with chronic diseases who were being treated by drugs developed through animal research. Having played a part in the defeat of referendums in Arizona and Florida to restrict the use of animals in research, the group is now looking for support in other states.

(continued on page 25-A)

Nebraska Medical Association Officers and Commissions

OFFICERS

L. Dwight Cherry, M.D., Lincoln..... President
C. A. McWhorter, M.D., Omaha..... President-Elect
Robert F. Shapiro, M.D., Lincoln..... Secretary-Treasurer
William L. Schellpeper, Lincoln..... Executive Director
James K. Ruigh, Lincoln..... Assistant Executive Director

AMA Delegates — C. J. Cornelius, Jr., M.D., Sidney;
John D. Coe, M.D., Omaha; Louis J. Gogela, M.D.,
Lincoln; Blaine Y. Roffman, M.D., Omaha.

BOARD OF DIRECTORS

L. Dwight Cherry, M.D., Kearney..... Chairman
C. A. McWhorter, M.D., Omaha..... Vice-Chairman
Robert F. Shapiro, M.D., Lincoln..... Secretary-Treasurer
Hiram R. Walker, M.D., Kearney..... Past President
Paul E. Collicott, M.D..... Lincoln
Richard A. Raymond, M.D..... O'Neill
Donald J. Pavelka, M.D..... Omaha
Richard H. Meissner, M.D..... Omaha
Harry R. McFadden, M.D., ProTem..... Omaha
C. T. Frerichs, M.D..... Beatrice

COMMISSION ON ASSOCIATION AFFAIRS

Harry W. McFadden, M.D., Chairman..... Omaha
R. A. Blatny, M.D..... Fairbury
Stuart P. Embury, M.D..... Holdrege
Joel T. Johnson, M.D..... Kearney
Bernard L. Kratochvil, M.D..... Omaha
Walter O'Donohue, M.D..... Omaha
Herbert E. Reese, M.D..... Lincoln
Joseph E. Stitche, M.D..... Lincoln
R. C. Weldon, M.D..... Nebraska City

SCIENTIFIC SESSIONS COMMITTEE

Sushil A. Lacy, M.D., Chairman..... Lincoln
Mark A. Christensen, M.D., Convention Chairman..... Omaha
David L. Bacon, M.D..... Kearney
Robert A. Beer, M.D..... Omaha
Mark A. Christensen, M.D..... Omaha
Richard A. Hranac, M.D..... Kearney
Donald J. Larson, M.D..... Lincoln
Richard M. Tempero, M.D..... Omaha
Donald E. Waltemath, M.D..... Lincoln
Rick J. Windle, M.D..... Lincoln
Richard S. Yates, M.D..... Lincoln
Eugene M. Zweiback, M.D..... Omaha

COMMISSION ON MEDICAL SERVICES

William L. Rumbolz, M.D., Chairman..... Omaha
Carl J. Cornelius, Jr., M.D..... Sidney
Richard A. Hranac, M.D..... Kearney
F. William Karrer, M.D..... Omaha
Dale E. Michels, M.D..... Lincoln
Merton Quaife, M.D..... Omaha
Kenton L. Shaffer, M.D..... Kearney

AD-HOC COMMITTEE ON MATERNAL & CHILD HEALTH

Kenton L. Shaffer, M.D., Chairman..... Kearney
Section on Maternal Mortality Review
George M. Adam, M.D..... Hastings
James G. Cummins, M.D..... Omaha
L. Palmer Johnson, M.D..... Lincoln
Gary D. Milius, M.D..... Lincoln
William F. Rayburn, M.D..... Omaha
William L. Rumbolz, M.D..... Omaha
Larry Wilson, M.D..... Gothenburg
Section on Perinatal Mortality Review
Lawrence C. Bausch, M.D..... Lincoln
Stacie R. Bleicher, M.D..... Lincoln
Robert M. Nelson, M.D..... Omaha
Gregg F. Wright, M.D..... Lincoln

AD-HOC COMMITTEE ON GERIATRICS

Richard A. Hranac, M.D., Chairman..... Kearney
Ronald L. Asher, M.D..... North Platte
James Carraher, M.D..... Lincoln
J. Whitney Kelley, M.D..... Omaha
Jane F. Potter, M.D..... Omaha
Richard Thompson, M.D..... Lincoln
John A. Ursick, M.D..... Omaha
Vernon G. Ward, M.D..... Omaha

AD-HOC COMMITTEE ON ALTERNATE HEALTH PLANS

Dale E. Michels, M.D., Chairman..... Lincoln
Lonnie S. Albers, M.D..... Lincoln
Vernon F. Garwood, M.D..... Lincoln
Robert L. Haag, M.D..... Lincoln
Michael J. Haller, M.D..... Omaha

Roger D. Mason, M.D..... Omaha
Margaret A. Moravec, M.D..... Lincoln
Richard H. Meissner, M.D..... Lincoln
Dwayne J. Peetz, Jr., M.D..... Omaha
Layton F. Rikkers, M.D..... Omaha
Sebastian J. Troia, M.D..... Omaha

COMMITTEE ON HEALTH PLANNING

Carl J. Cornelius, Jr., M.D., Chairman..... Sidney
Gordon D. Adams, M.D..... Norfolk
Lewiston W. Birkmann, M.D..... Lincoln
James S. Carson, M.D..... McCook
Chris C. Caudill, M.D..... Lincoln
Allen D. Dvorak, M.D..... Omaha
Dale W. Ebers, M.D..... Lincoln
Louis J. Gogela, Jr., M.D., Beatrice
Roger D. Mason, M.D..... Omaha
Donald F. Prince, M.D..... Minden
C. Lee Retelsdorf, M.D..... Omaha
Thomas H. Wallace, M.D..... Gordon

AD-HOC COMMITTEE ON TUMOR REGISTRY

F. William Karrer, M.D., Chairman..... Omaha
Elvin G. Brown, M.D..... Hastings
John H. Casey, M.D..... Lincoln
James R. Commers, M.D..... Omaha
Sushil S. Lacy, M.D..... Lincoln
Donald R. Owen, M.D..... Omaha
C. Lee Retelsdorf, M.D..... Omaha
Ron D. Scott, M.D..... Kearney

AD-HOC COMMITTEE ON LOW LEVEL RADIATION WASTE DISPOSAL

Merton A. Quaife, M.D., Chairman..... Omaha
Prentiss M. Dettman, M.D..... Lincoln
Allen D. Dvorak, M.D..... Omaha
David J. Hoelting, M.D..... Pender
Ernest O. Jones, Ph.D..... Omaha
Martin R. Lohff, M.D..... Omaha
W. E. Lundak, M.D..... Lincoln
William H. Northwall, M.D..... Kearney
Jerald R. Schenken, M.D..... Omaha

COMMISSION ON LEGISLATION AND GOVERNMENTAL AFFAIRS

Ronald L. Klutman, M.D., Chairman..... Columbus
Robert G. Osborne, M.D., Vice-Chairman..... Lincoln
Rodney S. W. Basler, M.D..... Lincoln
Judith A. Butler, M.D..... Superior
James H. Dunlap, M.D..... Norfolk
Dale W. Ebers, M.D..... Lincoln
Richard D. Fitch, M.D..... O'Neill
Charles Gregorius, M.D..... Lincoln
Bruce W. Henricks, M.D..... Fremont
Barbara M. Heywood, M.D..... Papillion
Mark R. Hutchins, M.D..... Lincoln
Max W. Linder, M.D..... Lincoln
Ann E. Lott, M.D..... Lincoln
William R. Marsh, M.D..... Grand Island
John T. McGreer, III, M.D..... Lincoln
Dennis G. O'Leary, M.D..... Omaha
Dwayne J. Peetz, M.D..... Neligh
Herbert E. Reese, M.D..... Lincoln
C. Lee Retelsdorf, M.D..... Omaha
Blaine Y. Roffman, M.D..... Omaha
Jerald R. Schenken, M.D..... Omaha
Todd S. Sorensen, M.D..... Scottsbluff
Richard B. Svehla, M.D..... Omaha
Timothy O. Wahl, M.D..... Omaha

AD-HOC COMMITTEE ON HEALTH POLICY STATEMENTS

C. Lee Retelsdorf, M.D., Chairman..... Omaha
Daniel S. Durrie, M.D..... Omaha
Joel T. Johnson, M.D..... Kearney
Darroll J. Loschen, M.D..... York
Dale E. Michels, M.D..... Lincoln
Stanley F. Nabity, M.D..... Grand Island
John F. Porterfield, M.D..... Lincoln
Gerald Rounsberg, M.D..... North Platte
Charles S. Wilson, M.D..... Lincoln

AD-HOC COMMITTEE ON PROFESSIONAL LIABILITY

James H. Dunlap, M.D., Chairman Norfolk
David L. Bacon, M.D. Kearney
Warren G. Bosley, M.D. Grand Island
Ernest W. Chupp, M.D. Omaha
F. M. Gawrecki, M.D. Papillion
Dwayne J. Peetz, M.D. Neligh
Richard M. Pitsch, Jr., M.D. Lincoln
Herbert E. Reese, M.D. Lincoln
Blaine Y. Roffman, M.D. Omaha

COMMISSION ON MEDICAL EDUCATION

Frederick F. Paustian, M.D., Chairman Omaha
Robert L. Bass, M.D. Elkhorn
Warren G. Bosley, M.D. Grand Island
Patrick E. Brookhouser, M.D. Omaha
Charles F. Damico, M.D. Hastings
Charles A. Dobry, M.D. Omaha
A. Dean Gilg, M.D. Lincoln
William E. Lundak, M.D. Lincoln
Richard L. O'Brien, M.D. Omaha
Dwayne J. Peetz, Jr., M.D. Omaha
Joseph C. Scott, M.D. Omaha
Robert H. Waldman, M.D. Omaha

AD-HOC COMMITTEE ON HEALTH EDUCATION & ATHLETIC MEDICINE

Warren G. Bosley, M.D., Chairman Grand Island
Patrick E. Clare, M.D., Vice-Chairman Lincoln
Richard W. Hammer, M.D. Lincoln
Stephen J. Lanspa, M.D. Omaha
Morris B. Mellon, M.D. Omaha
Paul H. Phillips, M.D. Scottsbluff
Richard A. Raymond, M.D. O'Neill
Eileen C. Vautravers, M.D. Lincoln
Hobart E. Wallace, M.D. Lincoln
Wesley G. Wilhelm, M.D. Omaha
Gregg F. Wright, M.D. Lincoln

COMMISSION ON PUBLIC AFFAIRS

Rodney S. W. Basler, M.D., Chairman Lincoln
H. Jeffrey Deeths, M.D. Omaha
Herbert D. Feidler, M.D. Norfolk
Edward E. Gatz, M.D. Omaha
Donald T. Glow, M.D. Omaha
John J. Hoelsing, M.D. Omaha
Roger P. Massie, M.D. Plainview
Donald E. Matthews, M.D. Lincoln
Harlan C. Shriner, M.D. Lincoln
F. Thomas Waring, M.D. Fremont

COMMISSION ON HOSPITAL MEDICAL STAFF

Glen F. Lau, M.D., Chairman Lincoln
Charles Heider, Jr., M.D. North Platte
Harry E. Keig, M.D. Papillion
Barney B. Rees, M.D. Omaha
Joseph G. Rogers, M.D. Lincoln
Larry D. Ruth, M.D. Lincoln
Steven A. Schwid, M.D. Omaha
Jerry K. Seiler, M.D. Hastings
William A. Shiffermiller, M.D. Omaha
Stephen D. Torpy, M.D. Omaha

AD-HOC COMMITTEE ON HEALTH GALLERY

Russell L. Gorthey, M.D., Chairman Lincoln
Warren G. Bosley, M.D. Grand Island
Glen F. Lau, M.D. Lincoln
Richard C. Olney, M.D. Lincoln
John L. Reed, M.D. Lincoln
Stanley M. Truhlsen, M.D. Omaha

AD-HOC COMMITTEE ON YOUNG PHYSICIANS

Richard A. Raymond, M.D., Chairman O'Neill
Gary W. Barth, M.D. Hastings
John I. Cherry, M.D. Lincoln
Norman Grosbach, M.D. Omaha
Herbert A. Hartman, Jr., M.D. Omaha
Katherine A. Keifer, M.D. Kearney
Jeanette L. Masek, M.D. Lincoln
Kirk B. Muffy, M.D. Omaha
Timothy P. O'Holleran, M.D. North Platte
Mark D. Pilley, M.D. Omaha
Bradley D. Rodgers, M.D. North Platte
William A. Shiffermiller, M.D. Omaha
Vincent J. Sutton, M.D. Hastings

NMA PRO OVERVIEW COMMITTEE

M. Jack Mathews, M.D., Chairman Lincoln
David Bacon, M.D. Kearney
Steven T. Bailey, M.D. Omaha
A. H. Bergman, M.D. Fremont
Dennis M. Connolly, M.D. Lincoln
Carl J. Cornelius, Jr., M.D., ... Sidney
Richard A. Cottingham, M.D. McCook
Francis D. Donahue, M.D. Omaha
Daniel S. Durrie, M.D. Omaha
John F. Fitzgibbons, M.D. Omaha
C. T. Frerichs, M.D. Beatrice
Gordon J. Hrnicek, M.D. Grand Island
Frederick F. Paustian, M.D. Omaha
Richard A. Raymond, M.D. O'Neill
Herbert E. Reese, M.D. Lincoln

AD-HOC COMMITTEE RE: BLUE SHIELD OF IOWA-MEDICARE

Paul E. Collicott, M.D., Chairman Lincoln
R.A. Blatney Fairbury
Steve Brase Lincoln
Thomas M. Connors, M.D. Omaha
Bob Gallion Lincoln
Vernon Garwood, M.D. Lincoln
Roger Massie, M.D. Plainview
Mrs. Janice Olson Lincoln
Donald Pavelka, M.D. Omaha
Richard B. Svehla, M.D. Omaha
Hiram R. Walker, M.D. Kearney

AD-HOC COMMITTEE ON MEDICAID SERVICES

Chris C. Caudill, M.D., Chairman Lincoln
Judith A. Butler, M.D. Superior
Dale W. Ebers, M.D. Lincoln
Russell L. Gorthey, M.D. Lincoln
Roger A. Jacobs, M.D. Seward
Ronald Klutman, M.D. Columbus
Harold M. Nordlund, M.D. York
Richard B. Svehla, M.D. Omaha
M. Allen Tompkins, M.D. Grand Island
Craig L. Urbauer, M.D. Lincoln

NEBRASKA MEDICAL ASSOCIATION

Dates to Remember

1987 Fall Session
September 10-12, 1987

120th Annual Session
April 29-May 3, 1988

ORGANIZATIONS, STATE

American Cancer Society, Nebraska Division, Inc.
Don W. McClure, Exec. Vice President
8502 West Center Rd., P.O. Box 241255, Omaha 68124-5255

American Diabetes Association - Nebraska Affiliate, Inc.
Ron Van Ryswyk, Ed.D., Executive Director
2730 South 114th St., Omaha 68144

American Heart Association, Nebraska Affiliate
Dennis N. Nissen, Executive Director
3624 Farnam St., Omaha 68131

American Lung Association of Nebraska
8901 Indian Hills Dr., Ste. 107, Omaha 68114
215 Centennial Mall South, Room 521, Lincoln 68508

American Red Cross
P.O. Box 83267
1701 "E" Street, Lincoln 68501

Arthritis Foundation, Nebraska Chapter, Inc.
Ellen Wright, Exec. Director
2229 N. 91st Court, Omaha 68134

Blue Cross and Blue Shield of Nebraska
William H. Heavey, President
P.O. Box 3248, Main Station, Omaha 68180

Cerebral Palsy of Lancaster County, Inc.
Jane Hofbart, Client Services Rep.
P.O. Box 80103, Lincoln 68501

Creighton University School of Medicine
Richard O'Brien, M.D., Dean
California at 24th St., Omaha 68178

Dairy Council of Central States, Inc.
7500 Main, 103 Hillcrest Landing
Ralston 68127

Division of Rehabilitation Services
Nebraska Department of Education
6th Floor, 301 Centennial Mall South, Lincoln 68509

Division of Rehabilitation Services for the Visually Impaired
James S. Nyman, Ph.D., Director
4600 Valley Road, Lincoln 68510

Easter Seal Society of Nebraska
Mrs. Letitia K. Simmons, Executive Director
3015 North 90th St., #6, Omaha 68134

Lincoln Council on Alcoholism & Drugs
914 "L" Street, Lincoln 68508

March of Dimes - Birth Defects Foundation
1618 L Street, Lincoln 68508

MID-PLAINS POISON CONTROL CENTER
Childrens Memorial Hospital, 8301 Dodge St., Omaha 68114
(402) 390-5400 or 800-642-9999 (toll free Nebraska)

Midlands Chapter, National Multiple Sclerosis Society
538 Elkwood Mall/The Center
42nd & Center, Omaha 68105-2982

Missouri Valley Dermatology Society
John R. Luckasen, M.D. Secretary
360 Doctors Bldg., N. Tower, Omaha 68131

Muscular Dystrophy Association
1912 No. 90th St., Lower Level, Omaha 68114

National Kidney Foundation of Nebraska
Karen Engelsman, Executive Director
2212 No. 91st Plaza, Omaha 68134
(402) 397-9234 - NE toll free 800-642-1255

National Society to Prevent Blindness, Nebraska Affiliate
120 North 69th St., Suite 203, Omaha 68132-2720

Nebraska Academy of Ophthalmology
Mylan VanNewkirk, M.D., President
329 West 40th, Scottsbluff 69361

Nebraska Academy of Otolaryngology
Michael Crawford, M.D., President
201 Ridge St., #311, Council Bluffs, IA 51501

Nebraska Allergy Society
Linda B. Ford, M.D., President
401 E. Gold Coast Rd., Papillion 68128-0

Nebraska Association of Nuclear Physicians, Inc.
Merton A. Quade, M.D., President
Division of Nuclear Medicine, Dept. of Radiology
UNMC - 42nd & Dewey, Omaha 68105

Nebraska Association of Pathologists
Joseph Rapoport, M.D., President
6301 No. 72nd St., Omaha 68122

Nebraska Chapter - American Academy of Family Physicians
Paul M. Paulman, M.D., Secretary-Treasurer
Phyllis G. Hansen, Executive Director
River City Office Park, #202, 401 No. 117th, Omaha 68154

Nebraska Chapter - American Academy of Physician Assistants
Joe E. Jeter, P.A.C. President
P.O. Box 397, North Bend 68649

Nebraska Chapter - American Academy of Pediatrics
H. J. Kuehn, M.D., Chairman
8300 Dodge St., #219, Omaha 68114

Nebraska Chapter - American College of Emergency Physicians
Richard L. Keller, M.D., President
9641 No. 29th, Omaha 68112

Nebraska Chapter - American College of Surgeons
Louis J. Gogela, M.D., Past President
2221 South 17th St., Lincoln 68502

Nebraska Chapter - American College of Physicians
Frederick F. Paustian, M.D., F.A.C.P., Governor
UNMC - 42nd & Dewey Ave., Omaha 68105

Nebraska Chapter of Myasthenia Gravis Foundation
John F. Aita, M.D., Medical Advisor
105 So. 49th St., Omaha 68132

Nebraska Cystic Fibrosis Association
Charles R. Bercaw, Executive Director
P.O. Box 31235, Omaha 68131

Nebraska Dental Association
Barry Ross, Executive Director
3120 O St., Lincoln 68510

Nebraska Dietetic Association
Linda O. Young, M.S., R.D., President
University of NE - 214 Ruth Leverton Hall, Lincoln 68583-0806

Nebraska Health Care Association
Patricia Snyder, Executive Director
3100 O St., Ste. 7, Lincoln 68510

Nebraska Hospital Association
Harlan Heald, President
Box 94833, 1335 L St., Lincoln 68509

Nebraska League for Nursing
Priscilla Allen, R.N., President
3800 N. 6th, #5, Beatrice 68310

Nebraska Medical Association
William L. Schellpeper, Executive Director
1512 FirstTier Bank Bldg., Lincoln 68508

Nebraska Medical Foundation
William L. Schellpeper, Secretary
1512 FirstTier Bank Bldg., Lincoln 68508

Nebraska Nurses Association
Mary Ann Sak, Executive Director
Suite 711, Terminal Bldg., Lincoln 68508

Nebraska Orthopaedic Society
Ronald Schwab, M.D., Secretary
2300 South 13th St., Lincoln 68502

Nebraska Perinatal Organization
Sheila Ecklund, R.N.
St. Elizabeth Community Health Center, 555 So. 70th, Lincoln 68510

Nebraska Pharmacists Association
Tom R. Dolan, R.P., Executive Director
600 So. 12th, Lincoln 68508

Nebraska Psychiatric Society, District Branch of the American Psychiatric Association
Jehangir B. Bastani, M.D., President
8110 Myrtle, Lincoln 68506

Nebraska Public Health Association
President, N.P.H.A.
P.O. Box 94813, Lincoln 68509

Nebraska Radiological Society
Terrance R. Rusthoven, M.D., President
2112 Faidley, Grand Island 68801

Nebraska Rheumatism Association
Arthur L. Weaver, M.D., President
2121 So. 56th St., Lincoln 68506

Nebraska Section, American College of Obstetricians & Gynecologists
Larry E. Rollman, M.D.
800 Doctors Bldg., Omaha 68131

Nebraska Society of Anesthesiologists
K. Reed Peters, M.D., President
1512 FirstTier Bank Bldg., Lincoln 68508

Nebraska Society of Internal Medicine
Vernon F. Garwood, M.D., President
120 Wedgewood Ave., Suite A, Lincoln 68510

Nebraska Society of Medical Assistants, Inc., an Affiliate of the American Association of Medical Assistants
Patty Hafer, CMA, President
Box 184, Sutherland 69165

Nebraska Society for Respiratory Therapy
Charlotte Pascoe, R.R.T., President
Southeast Community College, Lincoln 68505

Nebraska State Department of Health
Gregg Wright, M.D., Director of Health
301 Centennial Mall South, P.O. Box 95007, Lincoln 68509

Nebraska State Obstetric and Gynecology Society
Dennis D. Beavers, M.D., Secretary-Treasurer
720 No. 87th St., Omaha 68114

Nebraska Stroke Foundation
Karyl Newman, President
P.O. Box 67004, Lincoln 68506

Nebraska Urological Association
Alan H. Domina, M.D., President
4740 A Street, Lincoln 68510

Nebraska Veterinary Medical Association
Don Ellerbee, Executive Director
209 West 9th St., Hastings 68901

Omaha Mid-West Clinical Society
Ms. Lorraine E. Seibel, Executive Secretary
7363 Pacific St., #205-B, Omaha 68114

Physician Referral Program, Nebraska Department of Health
3rd Floor, State Office Building, 301 Centennial Mall So., Lincoln 68509

University of Nebraska Medical Center
Charles E. Andrews, M.D., Chancellor
42nd & Dewey, Omaha 68105

AMA News Notes

(continued from page 21-A)

The AMA sponsored meetings in Washington and New York City this spring to representatives of 12 major voluntary organizations, including the American Cancer Society, the Epilepsy Foundation of America, and the National Multiple Sclerosis Society.

A spokesman from the AMA's Office of Technology Assessment said the Association is now working with iiFAR to increase funding for its efforts.

* * *

U.S. physicians seeking to emigrate to Australia for purported immediate practice opportunities have been swindled out of thousands of dollars by a phoney recruiter, an Australian medical journal has warned.

Among the victims of the scheme were 20 physicians from Miami who were promised positions, AUSTRALIAN FAMILY PHYSICIAN has reported. Each paid \$300 as a deposit to "hold positions."

The journal said the "confidence trickster" claimed to be acting as an agent for a group of private American investors operating clinics and hospitals in Australia. The promotional scheme usually originated from either Great Britain or New Zealand. Since there is an oversupply of physicians in Australia, it said, promises of practice opportunities should be viewed with skepticism, the journal cautioned.

The con artist advised applicants that travel would be arranged once necessary documents were secured and a contract prepared. Interested physicians were told they had three months to make the move to Australia once they signed the "forthcoming" contractual agreement.

* * *

Drug/Alcohol/Emotional/Other Health Problems

HELP IS AVAILABLE
FOR YOU
FOR A MEMBER OF YOUR FAMILY
FOR A PROFESSIONAL, FRIEND OR
COLLEAGUE

Call
The Physician's Advocacy Committee
(Nebraska Medical Association)
Strictly Confidential — Professional — Effective

For information call:

402-393-3216

(You do not have to give your name.)

ADVERTISER'S INDEX

A	
Ayerst Laboratories	7, 8, 9, 10, 16, 17, 18
C	
Creighton University Medical Center.....	13
D	
Donley Medical Supply.....	6
F	
Family Practice Recertification.....	21
I	
Info-Builders, Inc.....	12
L	
Eli Lilly & Co.....	20
M	
Marion Laboratories.....	3, 4, 14, 15
N	
Naval Reserve Readiness Command	13
Norfolk Printing Co., Inc.....	6
O	
Omaha Midwest Clinical Society.....	12
R	
Roche Laboratories.....	27, 28
U	
U. S. Air Force.....	11
Upjohn Company	19

Physicians' Classified

Advertisements in this column are run at the rate of \$15.00 per insertion, for an advertisement of 50 words or less. An additional charge of 25¢ per word will be assessed for advertisements exceeding the 50-word limit. Copy must be received by the fifth of the month preceding the date of publication. Each advertisement will be removed following its first appearance unless otherwise instructed. If desired, advertisers may utilize a box number in care of THE NEBRASKA MEDICAL JOURNAL, 1512 First Tier Bank Bldg., Lincoln, NE 68508.

EMERGENCY MEDICINE: In Omaha NE — Full and Part-time positions available in an emergency department for qualified physician seeking lucrative employment opportunities. Outstanding remuneration and comprehensive malpractice insurance provided. For further information contact: Deborah Bergun, Staffing Specialist, National Emergency Services, Inc., 255 Executive Dr., Suite 104, Plainview, NY 11803 or call 1-800-645-4848 or 516-349-0100.

UROLOGIST: VA Medical Center, Lincoln, Nebraska. Seeking board certified or board eligible urologist for progressive, affiliated 180-bed Medical Center. Center is affiliated with University of Nebraska for urology residency program. Salary and bonus pay commensurate with training and experience. Licensure any state. Must meet English proficiency requirement. Allowable moving expenses payable. Equal Opportunity Employer. Write or call: 402-489-3802, Ext. 229, Chief, Surgical Service, VA Medical Center, 600 South 70th St., Lincoln, NE 68510.

FAMILY PHYSICIAN/GERIATRIC SPECIALTY: The Creighton University Center for Healthy Aging seeks board certified family physician with interest and experience in geriatrics, health promotion, interdisciplinary activity, teaching and service responsibilities. Direct inquiries or vita to: Michael Kasher, Associate Administrator, Department of Family Practice, Creighton University, 601 N. 30th St., Omaha, NE 68131, 402-280-4170.

PRACTICE OPPORTUNITY: Family physician needed to staff urgent care center in urban Nebraska community, 40 to 50 hours per week, no call, no OB, send CV to Box 029, **Nebraska Medical Journal**, 1512 First Tier Bank Bldg., Lincoln, NE 68508.

WANTED: Rushville, Nebraska, a small rural community in Western Nebraska, is seeking a general practitioner. A physician would be able to get on staff at Gordon Memorial Hospital (12 miles away). For more information write Barb Dreyer, Box 129, Rushville, NE 69360 or call 308-327-2248.

EMERGENCY MEDICINE—NEBRASKA: A full-time emergency department opportunity is currently available to provide coverage at several client hospitals in eastern Nebraska. Guaranteed rate of compensation and high-limit occurrence basis malpractice insurance coverage. Part-time positions are also available. For more information on our Nebraska opportunities, contact Mary Lou Doehrman, Spectrum Emergency Care, 6275 Lehman Dr., Suite C202, Colorado Springs, CO 80918; 1-800-525-3581.

YOUR OWN FAMILY PRACTICE: Salary guarantees, financial and other incentive offered. One physician practicing, seeking second, possibly third physician to own and operate clinic. Modern, well-equipped, financially sound, 20-bed hospital with attached clinic and ICF facility. Excellent E.M.T. rescue unit. Strong market area with tremendous potential. Ambitious, supportive community proud of its medical services. Recreation includes golf, tennis, racquetball, fishing, hunting, water skiing, movie theatre, supper club, civic organizations. North Central Accredited public school system. Fine family community. Contact Mike Shafer, Administrator, Fritzer Memorial Hospital, P.O. Box 218, Oxford, NE 68967, phone (308) 824-3271.

OPPORTUNITY: SEEKING ABFP-CERTIFIED FAMILY PHYSICIAN: Position available immediately to replace retiring third partner in pleasant family practice clinic. Full range of family practice. Clinic next to 40-bed acute care hospital. Rotating call schedule with time for education and vacations. ACS-certified general surgeons in town. Supportive 2200 population community. Rural farm/ranch area. Hunting, fishing and good flying weather. Salary first year with opportunity to buy in if mutually agreeable. M. K. Stockwell, M.D., Gordon Clinic, P.C., 807 N. Ash, Gordon, Nebraska 69343, Office: (308) 282-1442, Home: (308) 282-2292.

See the difference in the first week¹

- Sleep improvement in 74% of patients after first h.s. dose²
- Significantly faster relief—62% of total four-week improvement evident in first week versus 44% with amitriptyline alone¹
- Dramatic first-week reduction in somatic complaints²

% Reduction in Somatic Symptoms²

Vomiting	Nausea	Headache	Anorexia	Constipation
Reduced 90%	Reduced 86%	Reduced 72%	Reduced 62%	Reduced 60%

- Only 1/3 the dropout rate due to side effects of amitriptyline alone, although the incidence of side effects is similar¹

Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

Copyright © 1987 by Roche Products Inc. All rights reserved.



Protect your decision.
Write "Do not substitute."

In moderate depression
and anxiety

Limbitrol[®]

Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) 

Limbitrol[®] DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) 

References: 1. Feighner JP, et al. *Psychopharmacology* 61:217-225, Mar 22, 1979. 2. Data on file, Hoffmann-La Roche Inc., Nutley, NJ.

Limbitrol[®] Tranquiliizer—Antidepressant

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of moderate to severe depression associated with moderate to severe anxiety

Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants. Do not use with monoamine oxidase (MAO) inhibitors or within 14 days following discontinuation of MAO inhibitors since hyperpyretic crises, severe convulsions and deaths have occurred with concomitant use, then initiate cautiously, gradually increasing dosage until optimal response is achieved. Contraindicated during acute recovery phase following myocardial infarction.

Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving).

Usage in Pregnancy: Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage, withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline, symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).

Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady state concentrations of the tricyclic drugs. Concomitant use of Limbitrol with other psychotropic drugs has not been evaluated, sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.

Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely. The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs.

Cardiovascular: Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.

Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.

Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.

Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.

Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.

Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.

Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, block tongue.

Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion.

Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. IV administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single h.s. dose may suffice for some patients. Lower dosages are recommended for the elderly. Limbitrol DS (double strength) Tablets, initial dosage of three or four tablets daily in divided doses, increased up to six tablets or decreased to two tablets daily as required. Limbitrol Tablets, initial dosage of three or four tablets daily in divided doses, for patients who do not tolerate higher doses.

How Supplied: Double strength (DS) Tablets, white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and Tablets, blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt). Available in bottles of 100 and 500, Tel-E-Dose[®] packages of 100, Prescription Paks of 50.



ROCHE PRODUCTS INC.
Nutley, Puerto Rico 00701

The rewards of Limbitrol You're both smiling again!

See the difference in the first week¹

In depressed and anxious patients, you can see the difference sooner—62% of total four-week improvement achieved in the first week with Limbitrol versus 44% with amitriptyline.¹

In moderate depression and anxiety

Limbitrol[®]

Each tablet contains 5 mg clordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) ^(IV)

Limbitrol[®] DS

Each tablet contains 10 mg clordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) ^(IV)

ROCHE

Please see summary of product information on adjacent page.

THE NEBRASKA MEDICAL JOURNAL



119
Years



Contents

Original Articles —

The Biopsy **327**

J. H. Buchanan, Ph.D.

Gastric Stromal Tumors **336**

Michael J. McGahan, M.D.

Richard J. Windle, M.D.

Aina I. Silenieks, M.D.

Milestones in the First Century of
Medicine in Nebraska **339**

Martin L. Rothberg, M.D.

Gregory V. Stanislav, M.D.

Fracture of the Month —
Growth Arrest Following a Minimally
Displaced Distal Femoral
Epiphyseal Fracture **341**

J. F. Connolly, M.D.

R. Shindell

W. W. Huurman, M.D.

Clinical Case Conference, UNMC **344**

Gerald Moore, M.D.

T. Scot Robertson, M.D.

Howard P. Monsour, M.D.

Features

President's Page **354**

The Auxiliary **356**

Coming Meetings **357**

THE N.Y. ACADEMY OF MED.
LIB-PERIODICALS DEPT.
2 EAST 103RD ST.
NEW YORK
NY 10029

AIM HIGH

A SPECIAL PRACTICE F O R SPECIALISTS



If you're a **Surgeon** or **OB/GYN** or **Other Medical Specialist**, the Air Force may have a special practice for you.

What makes it special? You'll enjoy an excellent pay and benefits package. There'll be more time to spend with your family. You'll receive 30 days of vacation with pay each year. And you will work with modern equipment and some of the most highly trained professionals in the world, serving your country and your patients. Now that's special!

Find out just how special your practice can be. Call

TSgt James Sisley
(402) 556-0715 Collect



Motrin[®] 800mg

TABLETS
ibuprofen



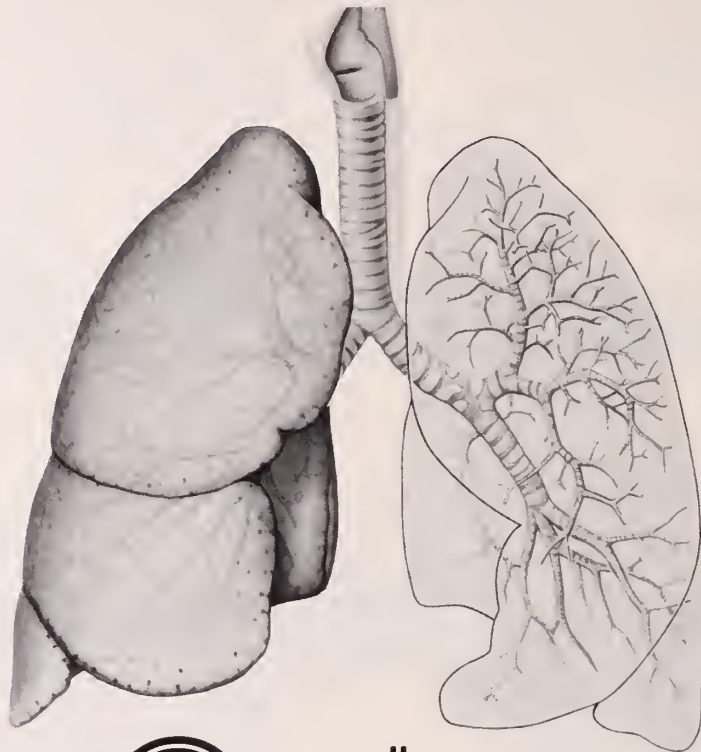
Extra strength
Convenience
Economy

Upjohn



A Century
of Caring
1886-1986

Consider the causative organisms...



Ceclor[®]
cefaclor

250-mg Pulvules[®] t.i.d.
offers effectiveness against
the major causes of bacterial bronchitis

Haemophilus influenzae, Streptococcus pneumoniae
(ampicillin-susceptible and ampicillin-resistant)

Note: Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

Ceclor[®] (cefaclor)

Summary. Consult the package literature for prescribing information.

Indications: Lower respiratory infections, including pneumonia, caused by susceptible strains of *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A β -hemolytic streptococci).

Contraindication:
Known allergy to cephalosporins.

Warnings:

CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients. Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:

- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:

- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] or the above skin manifestations accompanied by arthritis/arthritis and, frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness,

insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.

- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology

- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest[®] tablets but not with Tes-Tape[®] (glucose enzymatic test strip, Lilly).

[072868R]
PA 8794 AMP

© 1987, ELI LILLY AND COMPANY



Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285.

Eli Lilly Industries, Inc.
Carolina, Puerto Rico 00630

700241

The Nebraska Medical Journal

OCTOBER 1987

VOL. 72, NO. 10

EDITOR —

ALAN D. FORKER, M.D.
5505 Ellendale Road,
Lincoln, NE 68510

Associate Editors:

Deepak M. Gangahar, M.D., Lincoln
Charles S. Wilson, M.D., Lincoln

Editorial Board:

James O. Armitage, M.D., Omaha
Rodney S.W. Basler, M.D., Lincoln
Jehangir B. Bastani, M.D., Lincoln
John H. Casey, M.D., Lincoln
Paul E. Collicott, M.D., Lincoln
John F. Connolly, M.D., Omaha
Douglass Decker, Jr., M.D., Lincoln
Robert W. Gillespie, M.D., Lincoln
Stephen R. Grenier, M.D., Lincoln
Bruce D. Gutnik, M.D., Omaha
Roger Harned, M.D., Omaha
Edward A. Holyoke, Jr., M.D., Ogallala
Sushil S. Lacy, M.D., Lincoln
Hal K. Mardis, M.D., Omaha
Gilles R. G. Monif, M.D., Omaha
Walter J. O'Donohue, M.D., Omaha
William F. Rayburn, M.D., Omaha
John L. Reed, M.D., Lincoln
Jerald R. Schenken, M.D., Omaha
Kenton L. Shaffer, M.D., Kearney
Harlan C. Shriner, Jr., M.D., Lincoln
Patricia Cole Stivins, M.D., Lincoln
Harold W. Thaut, M.D., Beatrice
Jon S. Thompson, M.D., Omaha
William L. Vosik, M.D., Kearney
Arthur Weaver, M.D., Lincoln



SUBSCRIPTION RATE

\$18.00 Per Year U.S.
\$18.00 Per Year Foreign Country
Single Copies \$1.50 Each

Copyright © 1987 Nebraska Medical Association. Information concerning reprints of the articles in this Journal and concerning obtaining permission for the reproduction of any portion of this Journal may be obtained from the Editor.

The Nebraska Medical Journal does not assume responsibility for statements made or opinions expressed by the authors. Products and services advertised are neither endorsed nor warranted by the Nebraska Medical Association. The Nebraska Medical Journal reserves the right to accept or reject advertising copy.

Published monthly and Second-Class Postage paid at Lincoln, Nebraska and at additional mailing offices (ISSN 0091-6730)

Address all correspondence relating to subscriptions, advertising or address changes to William L. Schellpeper, Business Manager, 1512 First Tier Bank Building, Lincoln, Nebraska 68508. Phone (402) 474-4472.

ORIGINAL ARTICLES —

The Biopsy.....327
J. H. Buchanan, Ph.D.

Gastric Stromal Tumors.....336
Michael J. McGahan, M.D.
Richard J. Windle, M.D.
Aina I. Silenieks, M.D.

Milestones in the First Century of Medicine in Nebraska.....339
Martin L. Rothberg, M.D.
Gregory V. Stanislav, M.D.

Fracture of the Month —
Growth Arrest Following a Minimally Displaced
Distal Femoral Epiphyseal Fracture.....341
J. F. Connolly, M.D.
R. Shindell
W. W. Huurman, M.D.

Clinical Case Conference, UNMC.....344
Gerald Moore, M.D.
T. Scot Robertson, M.D.
Howard P. Monsour, M.D.

FEATURES —

President's Page.....354
The Auxiliary.....356
Coming Meetings.....357

REPRINTS

OF YOUR

Technical Articles

Are a direct presentation of research
and a valuable supplement
to any doctor's library.



It costs very little
to run reprints —
write us for prices

Norfolk Printing Co., Inc.

118 North Fifth
NORFOLK, NEBRASKA 68701

Letterheads - Statements
Envelopes - Office Forms
Quality Printing at the Right Price

Since 1925

Nebraska's
Leading
Physicians and
Surgical
Supply House

Phone 474-3222



**DONLEY MEDICAL
SUPPLY COMPANY**

P.O. Box 83108, Lincoln, NE 68501
AUTHORIZED CONTRACT AGENT

ADVICE TO AUTHORS

Manuscripts should be submitted in duplicate to the Editor at the following address: Alan D. Forker, M.D., 5505 Ellendale Road, Lincoln, Nebraska 68510. The manuscript should be typewritten, double-spaced, on 8½ x 11 in. paper, with generous margins on each page. Number all pages in the right upper corner with the author's surname.

Review articles will be considered, and should generally be limited to less than 4,000 words and approximately 30 references.

Manuscripts describing original clinical or laboratory research should be limited to 2,000 words and approximately 20 references.

Acknowledgements must be given when material from other publications is included. Provide names of authors, title of article, title of journal or book, volume number, pages, month and year, and publisher's permission to reprint.

Always send a covering letter or letter of transmittal with each manuscript, and refer to the manuscript by its title, in the letter and all correspondence. Do not send a manuscript that was published elsewhere.

Title page: each manuscript should have a title page, including the full name, academic degree, and hospital or university affiliation of each author. A name and address for reprint requests should be included on the title page, including street address, city, state, and zip code.

Summary for article: all major scientific articles should be accompanied by a summary at the end of the article, summarizing the key information and recommendations presented.

References: should be listed in the order in which they appear in the article and should be typed double-spaced. Authors are responsible for the completeness and accuracy of all cited references. Journal references should include authors' names and initials, title of article, abbreviated name of Journal (as listed in Index Medicus), volume number, inclusive pages, and year of publication. References to books should include authors, title, location and name of publisher, year of publication, edition, and page numbers.

Tables and illustrations: should be typed double-spaced on separate sheets of 8½ x 11 in. paper. Each Table should have a title. Illustrations should be prepared professionally and submitted as high-quality, glossy, unmounted black-and-white photographic prints, at least 5 x 7 in. Do not send original artwork. Each illustration should be consecutively numbered and cited in the text. Each photograph should have a gummed label on the back containing the figure number, name of senior author and an arrow indicating top of figure. Legends should be typed double-space for each illustration. Permission to reproduce a picture of a patient is needed, if such a picture is included.

Letters-to-the-Editor: letters are encouraged by all readers and will be published as space permits and at the discretion of the Editor. All letters should be accompanied by the notation: For publication. Galley proofs generally will not be returned to the authors pre-publication.

Manuscripts will be published in the order in which they are received, particularly in the order in which galley proofs are returned from the authors. The Editor of this Journal assumes no responsibility for opinions and claims expressed in an article published in this Journal.

Reprints should be ordered from the printer, Norfolk Printing Company, Inc., P.O. Box 278, Norfolk, Nebraska 68701.

To show you how many
hypertensives stayed on

INDERAL[®] LA
(PROPRANOLOL HCl)

after a major nationwide trial...



...we had
to find
just the
right room.



60,073 patients (90%) who started on INDERAL LA stayed on INDERAL LA.^{1*}

Surprising? Not really.

Because most patients on INDERAL LA (propranolol HCl) don't even know it's working.

A recent double-blind, placebo-controlled, crossover study in 138 hypertensive patients² revealed that INDERAL LA has a side effects profile unsurpassed by atenolol or metoprolol — which shows how well-tolerated once-daily INDERAL LA can be.

Sole therapy or concomitant therapy?

Fifty-nine percent of the time, INDERAL LA stood on its own.

The patients in the nationwide compliance trial were no different from yours. Generally when the antihypertensive regimen is complicated, compliance may become a problem. So, the effectiveness of INDERAL LA as once-daily monotherapy is a big plus. Of the remaining hypertensives in the program, 36% were treated merely with the addition of a diuretic to INDERAL LA.

For the noncompliant patients in your practice, INDERAL LA may well be the answer.

Almost 20,000 of the patients in the nationwide compliance trial were identified as having been noncompliant with their previous antihypertensive therapy. Their physicians reported that 88% showed improved compliance when placed on once-daily INDERAL LA.

Control, comfort, and compliance

ONCE-DAILY
INDERAL[®] LA
(PROPRANOLOL HCl) LONG ACTING CAPSULES

Like conventional INDERAL Tablets, INDERAL LA should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree, and bronchial asthma.

*After a 30-day trial with INDERAL LA, physicians reported that 90% of the patients would remain on INDERAL LA.

The one you know best keeps looking better

Please see next page for brief summary of prescribing information

NEW LOW DOSE
INDERAL[®] LA 60 mg
(PROPRANOLOL HCl) LONG ACTING CAPSULES
NOW AVAILABLE...

The one you know best keeps looking better

BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION SEE PACKAGE CIRCULAR)

INDERAL® LA brand of propranolol hydrochloride (Long Acting Capsules)

DESCRIPTION. INDERAL LA is formulated to provide a sustained release of propranolol hydrochloride. INDERAL LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first-degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE. Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY. The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOLYCEMIA. Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS. Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T_4 and reverse T_3 , and decreasing T_3 .

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case, this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL. Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should

be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to return of increased intraocular pressure.

CLINICAL LABORATORY TESTS. Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS. Patients receiving catecholamines: depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant in vivo use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenyltol, phenobarbital, and rifampin accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

Antipyrine and lidocaine have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T_3 concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY. Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY. Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose. There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS. INDERAL is excreted in human milk. Caution should be exercised when INDERAL (propranolol HCl) is administered to a nursing woman.

PEDIATRIC USE. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular. Bradycardia, congestive heart failure, intensification of AV block, hypotension; paresthesia of hands, thrombocytopenic purpura, arterial insufficiency, usually of the Raynaud type.

Central Nervous System. Light-headedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to cataplexy, visual disturbances; hallucinations, vivid dreams, an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slight clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy, and vivid dreams appear dose related.

Gastrointestinal. Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic. Pharyngitis and agranulocytosis/erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory. Bronchospasm.

Hematologic. Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune. In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous. Alopecia, LE-like reactions, psoriasisiform rashes, dry eyes, male impotence and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg-for-mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—Dosage must be individualized. The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood-pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—Dosage must be individualized. Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—Dosage must be individualized. The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.
PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

REFERENCES:

1. INDERAL LA National Compliance Evaluation Program. Data on file, Ayerst Laboratories.
2. Ravid M, Lang R, Jutrin I. The relative antihypertensive potency of propranolol, oxprenolol, atenolol, and metoprolol given once daily. *Arch Intern Med* 1985; 145:1321-1323.

1R719/887

Ayerst

AYERST LABORATORIES
New York, NY 10017

© 1987 Ayerst Laboratories

CLARKSON MEDICAL LECTURE SERIES



NEPHROLOGY FOR THE PRACTICING PHYSICIAN

Friday, November 13, 1987

Clarkson Hospital Storz Pavilion

8 a.m. to 5 p.m.

**Featured speakers include: Robert W. Schrier, M.D.
James P. Knochel, M.D.**

Topics include:

New Concepts in Hypertension & Antihypertensive Therapy

Diagnosis & Management of Acute Renal Failure

Proteinuria, Hematuria and Chronic Renal Failure: Office Management

Acid-Base Disturbances: Recognition and Management

Diagnosis & Management of Common Fluid and Electrolyte Disorders

Urinary Tract Infections: Aids for Management of Difficult Problems

Workshops

8 C.M.E. and 8 A.A.F.P. credits to be awarded.

Lecture Series courtesy of
Bishop Clarkson Memorial Hospital
Medical/Dental Staff
44th and Dewey Avenue
Omaha, NE 68105-1018

For more information call 402-559-3378

COUNCILOR DISTRICTS AND COUNTIES

First District: Councilor: Richard B. Svehla, Omaha. Counties: Douglas, Sarpy.

Second District: Councilor: Sushil S. Lacy, Lincoln. Counties: Cass, Lancaster, Otoe.

Third District: Councilor: C. T. Frerichs, Beatrice. Counties: Gage, Johnson, Nemaha, Pawnee, Richardson.

Fourth District: Councilor: Roger Massie, Plainview. Counties: Antelope, Cedar, Cuming, Dakota, Dixon, Knox, Madison, Pierce, Stanton, Thurston, Wayne.

Fifth District: Councilor: William Chleborad, M.D., Fremont. Counties: Boone, Burt, Colfax, Dodge, Merrick, Nance, Platte, Washington.

Sixth District: Councilor: Robert Herpolsheimer, M.D., Seward. Counties: Butler, Hamilton, Polk, Saunders, Seward, York.

Seventh District: Councilor: Robert Quick, M.D., Crete. Counties: Clay, Fillmore, Jefferson, Nuckolls, Saline, Thayer.

Eighth District: Councilor: Floyd H. Shiffermiller, Ainsworth. Counties: Boyd, Brown, Cherry, Holt, Keya Paha, Rock, Sheridan.

Ninth District: Councilor: Stanley Nabity, Grand Island. Counties: Blaine, Buffalo, Custer, Dawson, Garfield, Grant, Greeley, Hall, Hooker, Howard, Loup, Sherman, Thomas, Valley, Wheeler.

Tenth District: Councilor: David R. Little, M.D., Hastings. Counties: Adams, Chase, Dundy, Franklin, Frontier, Furnas, Gosper, Harlan, Hayes, Hitchcock, Kearney, Phelps, Red Willow, Webster.

Eleventh District: Councilor: Donald E. Fischer, North Platte. Counties: Arthur, Deuel, Garden, Keith, Lincoln, Logan, McPherson, Perkins.

Twelfth District: Councilor: Donald E. Wilkinson, Alliance. Counties: Banner, Box Butte, Cheyenne, Dawes, Kimball, Morrill, Scotts Bluff, Sioux.

NEBRASKA MEDICAL ASSOCIATION

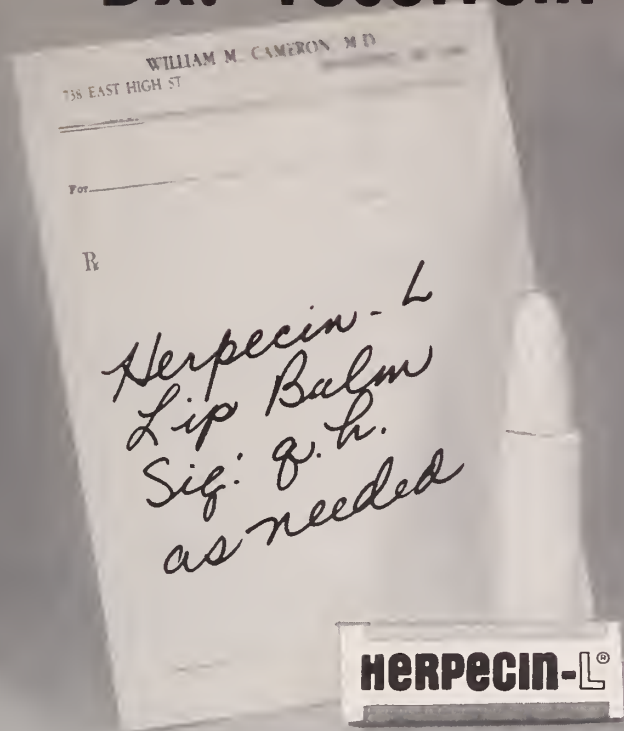
Councilor Districts and Component County Medical Societies COMPONENT COUNTY MEDICAL SOCIETIES

COUNTY	PRESIDENT	SECRETARY-TREASURER
Adams	Kevin Wycoff, Hastings	Richard French, Hastings
Antelope-Pierce	Kenneth Peters, Plainview	David Johnson, Osmond
Box Butte	Wendell Fairbanks, Alliance	Chris Wilkinson, Alliance
Buffalo	John Schulte, Kearney	Gerry Jensen, Kearney
Butler	Victor Thoendel, David City	Jack Kaufmann, David City
Cass	R. R. Anderson, Nehawka	Glen K. Knosp, Elmwood
Cheyenne-Kimball-Deuel	James Thayer, Sidney	Clinton Dorwart, Sidney
Cuming		Gordon Moshman, West Point
Custer	Loren Jacobsen, Broken Bow	N. Leon Books, Broken Bow
Dawson		Rodney Sitorius, Cozad
Dodge	Rod Koerber, Fremont	W. B. Eaton, Fremont
Five	Willis L. Wiseman, Wayne	Robert Benthack, Wayne
Four	Tom Martin, Ord	Otis Miller, Ord
Gage	Alan Langvardt, Beatrice	Louis J. Gogela, Jr., Beatrice
Hall	L. W. Hake, Grand Island	Gordon Francis, Grand Island
Hamilton	M. D. Jobman, Aurora	G. D. Penner, Aurora
Holt & Northwest	Melvin Campbell, Ainsworth	John Bryd, Valentine
Jefferson	Gordon O. Johnson, Fairbury	R. A. Blatny, Fairbury
Knox	D. M. Laflan, Creighton	D. J. Nagengast, Bloomfield
Lancaster	C. L. Barton, Lincoln	M. A. Breiner, Lincoln
Lincoln	Dell Shepherd, North Platte	Timothy O'Holleran, North Platte
Madison	G. Tom Surber, Norfolk	C. Robert Adams, Norfolk
Metropolitan Omaha	Jerald R. Schenken, Omaha	F. F. Paustian, Omaha
Northeast	G. Tom Surber, Norfolk	C. Robert Adams, Norfolk
Northwest	Joel Hutchins, Gordon	R. H. Rasmussen, Chadron
Otoe	Dean R. Thomson, Nebraska City	Paul R. Madison, Nebraska City
Keith-Perkins-Chase	Berl W. Spencer, Ogallala	E. A. Holyoke, Ogallala
Platte-Loup Valley	Arthur Liebentritt, Columbus	Dwight Rickard, Columbus
Saline		Robert E. Tuma, Crete
Sarpy	Fred Gaweck, Papillion	Fred Schwartz, Papillion
Saunders	I. M. French, Wahoo	John E. Hansen, Jr., Wahoo
Scotts Bluff	Lowell Stratton, Mitchell	Vonn Roberts, Scottsbluff
Seward	Paul Plessman, Seward	Van Vahle, Seward
South Central	Jeff Hollis, Geneva	Chas. F. Ashby, Geneva
Southeast Nebr.	Gary Ens, Auburn	George Voigtlander, Pawnee City
Southwest Nebr.	David A. Allerheilgen, McCook	E. C. Beyer, McCook
Washington-Burt	H. Neal Sievers, Blair	K. C. Bagby, Blair
York	James D. Bell, York	Darroll J. Loschen, York

ORGANIZATIONS, STATE

- American Cancer Society, Nebraska Division, Inc.**
Don W. McClure, Exec. Vice President
8502 West Center Rd., P.O. Box 241255, Omaha 68124-5255
- American Diabetes Association - Nebraska Affiliate, Inc.**
Ron Van Ryswyk, Ed.D., Executive Director
2730 South 114th St., Omaha 68144
- American Heart Association, Nebraska Affiliate**
Dennis N. Nissen, Executive Director
3624 Farnam St., Omaha 68131
- American Lung Association of Nebraska**
8901 Indian Hills Dr., Ste. 107, Omaha 68114
215 Centennial Mall South, Room 521, Lincoln 68508
- American Red Cross**
P.O. Box 83267
1701 "E" St., Lincoln 68501
- Arthritis Foundation, Nebraska Chapter, Inc.**
Ellen Wright, Exec. Director
2229 N. 91st Court, Omaha 68134
- Blue Cross and Blue Shield of Nebraska**
William H. Heavey, President
P.O. Box 3248, Main Station, Omaha 68180
- Cerebral Palsy of Lancaster County, Inc.**
Jane Hoffart, Client Services Rep.
P.O. Box 80103, Lincoln 68501
- Creighton University School of Medicine**
Richard O'Brien, M.D., Dean
California at 24th St., Omaha 68178
- Dairy Council of Central States, Inc.**
7500 Main, 103 Hillcrest Landing
Ralston 68127
- Division of Rehabilitation Services**
Nebraska Department of Education
6th Floor, 301 Centennial Mall South, Lincoln 68509
- Division of Rehabilitation Services for the Visually Impaired**
James S. Nyman, Ph.D., Director
4600 Valley Road, Lincoln 68510
- Easter Seal Society of Nebraska**
Mrs. Letitia K. Simmons, Executive Director
3015 North 90th St., #6, Omaha 68134
- Lincoln Council on Alcoholism and Drugs**
914 "L" Street, Lincoln 68508
- March of Dimes - Birth Defects Foundation**
1618 L Street, Lincoln 68508
- MID-PLAINS POISON CONTROL CENTER**
Childrens Memorial Hospital, 8301 Dodge St., Omaha 68114
(402) 390-5400 or 800-642-9999 (toll free Nebraska)
- Midlands Chapter, National Multiple Sclerosis Society**
538 Elkwood Mall/The Center
42nd & Center, Omaha 68105-2982
- Missouri Valley Dermatologic Society**
John R. Luckasen, M.D., Secretary
360 Doctors Bldg., N. Tower, Omaha 68131
- Muscular Dystrophy Association**
1912 No. 90th St., Lower Level, Omaha 68114
- National Kidney Foundation of Nebraska**
Karen Engelsman, Executive Director
2212 No. 91st Plaza, Omaha 68134
(402) 397-9234 - NE toll free 800-642-1255
- National Society to Prevent Blindness, Nebraska Affiliate**
120 North 69th St., Suite 203, Omaha 68132-2720
- Nebraska Academy of Ophthalmology**
Mylan VanNewkirk, M.D., President
329 West 40th, Scottsbluff 69361
- Nebraska Academy of Otolaryngology**
Michael Crawford, M.D., President
201 Ridge St., #311, Council Bluffs, IA 51501
- Nebraska Allergy Society**
Linda B. Ford, M.D., President
401 E. Gold Coast Rd., Papillion 68128
- Nebraska Association of Nuclear Physicians, Inc.**
Merton A. Quaife, M.D., President
Division of Nuclear Medicine, Dept. of Radiology
UNMC - 42nd & Dewey, Omaha 68105
- Nebraska Association of Pathologists**
Joseph Rapoport, M.D., President
6901 No. 72nd St., Omaha 68122
- Nebraska Chapter - American Academy of Family Physicians**
Paul M. Paulman, M.D., Secretary-Treasurer
Phyllis G. Hansen, Executive Secretary
River City Office Park, #202, 401 N 117th, Omaha 68154
- Nebraska Chapter - American Academy of Physician Assistants**
Joe E. Jeter, PA-C, President
P.O. Box 397, North Bend 68649
- Nebraska Chapter - American Academy of Pediatrics**
H. J. Kuehn, M.D., Chairman
8300 Dodge St., #219, Omaha 68114
- Nebraska Chapter - American College of Emergency Physicians**
Richard L. Keller, M.D., President
9641 No. 29th, Omaha 68112
- Nebraska Chapter - American College of Surgeons**
Louis J. Gogela, M.D., Past President
2221 South 17th St., Lincoln 68502
- Nebraska Chapter - American College of Physicians**
Frederick F. Paustian, M.D., F.A.C.P., Governor
UNMC - 42nd & Dewey Ave., Omaha 68105
- Nebraska Chapter of Myasthenia Gravis Foundation**
John F. Aita, M.D., Medical Advisor
105 So. 49th St., Omaha 68132
- Nebraska Cystic Fibrosis Association**
Charles R. Bercaw, Executive Director
P.O. Box 31235, Omaha 68131
- Nebraska Dental Association**
Barry Ross, Executive Director
3120 O St., Lincoln 68510
- Nebraska Dietetic Association**
Linda O. Young, M.S., R.D., President
University of NE - 214 Ruth Leverton Hall, Lincoln 68503-0806
- Nebraska Health Care Association**
Patricia Snyder, Executive Director
3100 "O" St., Ste. 7, Lincoln 68510
- Nebraska Hospital Association**
Harlan Heald, President
Box 94833, 1335 L St., Lincoln 68509
- Nebraska League for Nursing**
Priscilla Allen, R.N., President
3800 N. 6th, #5, Beatrice 68310
- Nebraska Medical Association**
William L. Schellpeper, Executive Director
1512 FirstTier Bank Bldg., Lincoln 68508
- Nebraska Medical Foundation**
William L. Schellpeper, Executive Director
1512 FirstTier Bank Bldg., Lincoln 68508
- Nebraska Nurses Association**
Mary Ann Sak, Executive Director
Suite 711, Terminal Bldg., Lincoln 68508
- Nebraska Orthopaedic Society**
Ronald Schwab, M.D., Secretary
2300 South 13th St., Lincoln 68502
- Nebraska Perinatal Organization**
Sheila Ecklund, R.N.
St. Elizabeth Community Health Center, 555 So. 70th, Lincoln 68510
- Nebraska Pharmacists Association**
Tom R. Dolan, R.P., Executive Director
600 So. 12th, Lincoln 68508
- Nebraska Psychiatric Society, District Branch of the American Psychiatric Association**
Jehangir B. Bastani, M.D., President
8110 Myrtle, Lincoln 68506
- Nebraska Public Health Association**
President, N.P.H.A.
P.O. Box 94813, Lincoln 68509
- Nebraska Radiological Society**
Terrance R. Rusthoven, M.D., President
2112 Faidley, Grand Island 68801
- Nebraska Rheumatism Association**
Arthur L. Weaver, M.D., President
2121 South 56th St., Lincoln 68506
- Nebraska Section, American College of Obstetricians & Gynecologists**
Larry E. Roffman, M.D.
800 Doctors Bldg., Omaha 68131
- Nebraska Society of Anesthesiologists**
K. Reed Peters, M.D., President
1512 FirstTier Bank Bldg., Lincoln 68508
- Nebraska Society of Internal Medicine**
Vernon Garwood, M.D., President
120 Wedgewood Ave., Suite A, Lincoln 68510
- Nebraska Society of Medical Assistants, Inc., an Affiliate of the American Association of Medical Assistants**
Patty Hater, CMA, President
Box 184, Sutherland 69165
- Nebraska Society for Respiratory Therapy**
Charlotte Pascoe, R.R.T., President
Southeast Community College, Lincoln 68505
- Nebraska State Department of Health**
Gregg Wright, M.D., Director of Health
301 Centennial Mall South, P.O. Box 95007, Lincoln 68509
- Nebraska State Obstetric and Gynecology Society**
Dennis D. Beavers, M.D., Secretary-Treasurer
720 No. 87th St., Omaha 68114
- Nebraska Stroke Foundation**
Karyl Newman, President
P.O. Box 67004, Lincoln 68506
- Nebraska Urological Association**
Alan H. Domina, M.D., President
4740 A Street, Lincoln 68510
- Nebraska Veterinary Medical Association**
Don Ellerbee, Executive Director
209 West 9th St., Hastings 68901
- Omaha Mid-West Clinical Society**
Ms. Lorraine E. Seibel, Executive Secretary
7363 Pacific St., #205-B, Omaha 68114
- Physician Referral Program, Nebraska Department of Health**
3rd Floor, State Office Building, 301 Centennial Mall So., Lincoln 68509
- University of Nebraska Medical Center**
Charles E. Andrews, M.D., Chancellor
42nd & Dewey Ave., Omaha 68105

Dx: recurrent herpes labialis



"HERPECIN-L is my **treatment of choice** for perioral herpes." GP, NY

"HERPECIN-L appears to actually **prevent** the blisters . . . used **soon enough**." DDS, MN

"HERPECIN-L . . . a **conservative approach** with **low risk/high benefits**." MD, FL

"Used at **prodromal symptoms** . . . blisters **never formed** . . . remarkable." DH, MA

"(In clinical trials) . . . **response was dramatic**. **HERPECIN-L** . . . proven **far superior**." DDS, PA

"All patients claimed **shorter duration** . . . at **prodromal symptoms** . . . **HERPECIN-L averted the attacks**." MD, AK

OTC. See *P.D.R.* for information. For samples to make your own clinical evaluation, write: CAMPBELL LABORATORIES, INC., P.O. BOX 812-MD, FDR STATION, NEW YORK, N.Y. 10150

In Nebraska HERPECIN-L is available at all *Keystone, Osco and Walgreens* and other select pharmacies.

AMA News Notes

Because of overwhelming interest, the series of three monographs, "Information on AIDS for the Practicing Physician," originally published in three issues of *American Medical News* (July 17, 24, 31) is now available in a single volume.

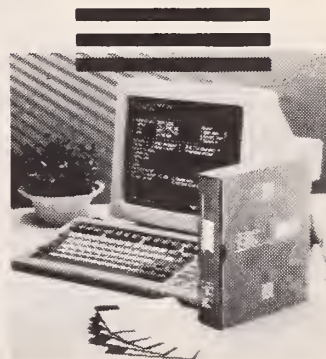
The price of the volume is \$1. Write to: Leatha Tiggelaar, Science and Technology, AMA, 535 N. Dearborn St., Chicago, Ill. 60610. Checks should be made payable to the American Medical Assn.

* * *

Is it time for a change in the way physicians are reimbursed by Medicare?

The AMA has published a booklet outlining its position on the subject. The booklet, titled *Medicare Physician Reimbursement, An AMA Perspective*, gives a concise but comprehensive summary of Medicare reimbursement from the "customary, prevailing, reasonable (CPR)" system now used by the Health Care Financing

(continued on page 19-A)



Physicians who have thoroughly investigated their choices are selecting MDX* medical data software.

MDX

*MDX is a trademark of Calyx, Inc.

Call us about the multi-user, multi-tasking MDX system. We will send you a video tape presentation.



INFO-BUILDERS, INC.

402/331-2546
11203 JOHN GALT BOULEVARD
OMAHA, NEBRASKA 68137

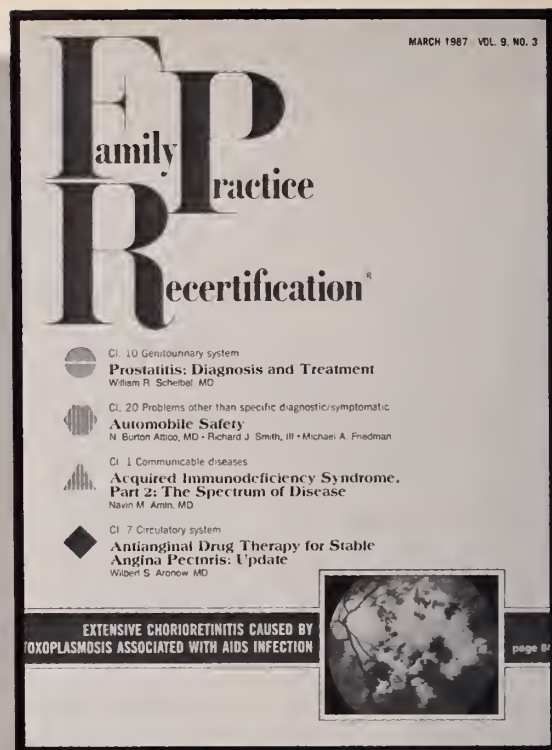
Providing complete installation, training and support services.

The complete journal for family practice physicians

- Reaches 79,000 family physicians monthly
- Presents the most commonly seen patient problems in family practice
- Written by physicians for physicians
- The most current clinical updates in:

Cardiology	Ob/Gyn
Diabetes	Psychiatry
Pediatrics	Gastroenterology
- Provides 20 hours of CME Category 1 Credit

PRACTICAL • CLINICAL • EDUCATIONAL • CURRENT



ORGANIZATIONS, NATIONAL

American Academy of Family Physicians
1740 West 92nd St., Kansas City, MO 64114

American Academy of Pediatrics
James E. Strain, M.D., Executive Director
141 Northwest Point Road, P.O. Box 927
Elk Grove Village, IL 60009-0927

American Academy of Physician Assistants
F. Lynn Maly, Executive Vice President
1117 N. 19th St., 3rd Floor
Arlington, VA 22209

American Academy of Ophthalmology
Thomas P. Kearns, M.D., President
655 Beach Street, P.O. Box 7424
San Francisco, CA 94120-7424

American College of Emergency Physicians
Colin C. Rorrie, Jr., Ph.D., Executive Director
Box 619911, Dallas, TX 75261-9911

American College of Legal Medicine
Mr. Thomas W. Teal, Executive Secretary
P.O. Box 190, Maple Glen, PA 19002

American College of Obstetricians & Gynecologists
Warren H. Pearce, M.D., Executive Director
600 Maryland Avenue, S.W., Ste. 300 E
Washington, D.C. 20024

American College of Physicians
John R. Ball, M.D., J.D., F.A.C.P., Exec. Vice President
4200 Pine St., Philadelphia, PA 19104

American College of Radiology
John J. Curry, Executive Director
1981 Preston White Drive, Reston, VA 22091

American College of Surgeons
Paul A. Ebert, M.D., Director
55 East Erie St., Chicago, IL 60611

American Diabetes Association, Inc.
Robert S. Bolan, Exec. Vice President
1660 Duke Street, Alexandria, VA 22314

American Heart Association National Center
Mr. Dudley Hafner, Exec. Vice President
7320 Greenville Ave., Dallas, TX 75231

American Hospital Association
Carol M. McCarthy, Ph.D., J.D., President
840 North Lake Shore Dr., Chicago, IL 60611

American Medical Association
James H. Sammons, M.D., Exec. Vice President
535 No. Dearborn St., Chicago, IL 60610

American Society of Anesthesiologists
Mr. J. W. Andes, Executive Secretary
515 Busse Hwy., Park Ridge, IL 60068

American Society of Clinical Pathologists
Robert A. Dietrich, M.D., Chief Executive
2100 W. Harrison St., Chicago, IL 60612

American Society of Internal Medicine
Joseph F. Boyle, M.D., Exec. Vice President
1101 Vermont N.W., Ste. 500, Washington, D.C. 20005

American Urological Society
Mr. Richard J. Hannigan, Executive Secretary
1120 No. Charles St., Baltimore, MD 21201

Arthritis Foundation
Clifford M. Clarke, C.A.E., President
1314 Spring St., N.W., Atlanta, GA 30309

International College of Surgeons
F. C. Ottati, M.D., Int. Sec. General
1516 North Lake Shore Dr., Chicago, IL 60610

National Rehabilitation Association
633 S. Washington St., Alexandria, VA 22314

Radiological Society of North America
Richard E. Buenger, M.D., President
1415 W. 22nd St., Oak Brook, IL 60521

South Central Section of the American Urological Association, Inc.
Henry Kammendel, M.D., Past President
8300 Dodge St., Ste. 407, Omaha, NE 68114

Before prescribing, see complete prescribing information in SK&F CO. literature or PDR. The following is a brief summary.

WARNING

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K⁺ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K⁺ intake. Associated widened QRS complex or arrhythmia requires prompt additional therapy. Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.

Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium; use with caution with 'Dyazide'. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin [ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function. Thiazides may add to or potentiate the action of other antihypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.

Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak™ unit-of-use bottles of 100.

BRS-DZ:L42

In Hypertension*... When You Need to Conserve K⁺

Remember the Unique Red and White Capsule: Your Assurance of SK&F Quality

Serum K⁺ and BUN should be checked periodically (see Warnings and Precautions).



Potassium-Sparing
DYAZIDE®
25 mg Hydrochlorothiazide/50 mg Triamterene/SKF
Over 20 Years of Confidence

The unique
red and white
Dyazide® capsule:
Your assurance of
SK&F quality.



a product of
SK&F CO.
Carolina, P.R. 00630

There's never been a better time for her





nd PREMARIN[®]

**Proven benefits beyond relief
of vasomotor symptoms**

**No other estrogen proven
effective for osteoporosis**

Only conjugated estrogens tablets have established efficacy in both osteoporosis¹ and vasomotor symptoms* at 0.625 mg/day. No other estrogen, oral or transdermal, has established clinical evidence or minimum effective dose in both indications.

No estrogen proven safer

PREMARIN is the most extensively tested estrogen, with an unsurpassed record of long-term safety.

And clinical evidence shows a significantly reduced risk of endometrial hyperplasia when cycled with a progestin.²

PREMARIN[®]
(conjugated estrogens tablets)

Most trusted for more reasons

*PREMARIN is indicated for moderate-to-severe vasomotor symptoms.

Please see following page for brief summary
of prescribing information.

For moderate-to-severe vasomotor symptoms and for osteoporosis

PREMARIN® (conjugated estrogens tablets)



0.3 mg 0.625 mg 0.9 mg 1.25 mg 2.5 mg

The appearance of these tablets is a trademark of Ayerst Laboratories.

BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION AND PATIENT INFORMATION, SEE PACKAGE CIRCULARS)

PREMARIN® Brand of conjugated estrogens tablets, USP

PREMARIN® Brand of conjugated estrogens Vaginal Cream, in a nonliquefying base

1 ESTROGENS HAVE BEEN REPORTED TO INCREASE THE RISK OF ENDOMETRIAL CARCINOMA. Three independent, case-controlled studies have reported an increased risk of endometrial cancer in postmenopausal women exposed to exogenous estrogens for more than one year. This risk was independent of the other known risk factors for endometrial cancer. These studies are further supported by the finding that incidence rates of endometrial cancer have increased sharply since 1969 in eight different areas of the United States with population-based cancer reporting systems, an increase which may be related to the rapidly expanding use of estrogens during the last decade. The three case-controlled studies reported that the risk of endometrial cancer in estrogen users was about 4.5 to 13.9 times greater than in nonusers. The risk appears to depend on both duration of treatment and on estrogen dose. In view of these findings, when estrogens are used for the treatment of menopausal symptoms, the lowest dose that will control symptoms should be utilized and medication should be discontinued as soon as possible. When prolonged treatment is medically indicated, the patient should be reassessed on at least a semi-annual basis to determine the need for continued therapy. Although the evidence must be considered preliminary, one study suggests that cyclic administration of low doses of estrogen may carry less risk than continuous administration, it therefore appears prudent to utilize such a regimen. Close clinical surveillance of all women taking estrogens is important. In all cases of undiagnosed persistent or recurring abnormal vaginal bleeding, adequate diagnostic measures should be undertaken to rule out malignancy. There is no evidence at present that "natural" estrogens are more or less hazardous than "synthetic" estrogens at equi-estrogenic doses.

2 ESTROGENS SHOULD NOT BE USED DURING PREGNANCY

The use of female sex hormones, both estrogens and progestogens, during early pregnancy may seriously damage the offspring. It has been shown that females exposed in utero to diethylstilbestrol, a nonsteroidal estrogen, have an increased risk of developing, in later life, a form of vaginal or cervical cancer that is ordinarily extremely rare. This risk has been estimated as not greater than 4 per 1,000 exposures. Furthermore, a high percentage of such exposed women (from 30% to 90%) have been found to have vaginal adenosis, epithelial changes of the vagina and cervix. Although these changes are histologically benign, it is not known whether they are precursors of malignancy. Although similar data are not available with the use of other estrogens, it cannot be presumed they would not induce similar changes. Several reports suggest an association between intrauterine exposure to female sex hormones and congenital anomalies, including congenital heart defects and limb-reduction defects. One case-controlled study estimated a 4.7-fold increased risk of limb-reduction defects in infants exposed in utero to sex hormones (oral contraceptives, hormone withdrawal tests for pregnancy or attempted treatment for threatened abortion). Some of these exposures were very short and involved only a few days of treatment. The data suggest that the risk of limb-reduction defects in exposed fetuses is somewhat less than 1 per 1,000. In the past, female sex hormones have been used during pregnancy in an attempt to treat threatened or habitual abortion. There is considerable evidence that estrogens are ineffective for these indications, and there is no evidence from well-controlled studies that progestogens are effective for these uses. If PREMARIN is used during pregnancy, or if the patient becomes pregnant while taking this drug, she should be apprised of the potential risks to the fetus, and the advisability of pregnancy continuation.

DESCRIPTION: PREMARIN (conjugated estrogens, USP) contains a mixture of estrogens, obtained exclusively from natural sources, blended to represent the average composition of material derived from pregnant mares urine. It contains estrone, equilin, and 17 α -dihydroequilin, together with smaller amounts of 17 α -estradiol, equilenin, and 17 α -dihydroequilenin as salts of their sulfate esters. Tablets are available in 0.3 mg, 0.625 mg, 0.9 mg, 1.25 mg, and 2.5 mg strengths of conjugated estrogens. Cream is available as 0.625 mg conjugated estrogens per gram.

INDICATIONS AND USAGE: PREMARIN (conjugated estrogens tablets, USP). Moderate-to-severe vasomotor symptoms associated with the menopause. (There is no evidence that estrogens are effective for nervous symptoms or depression without associated vasomotor symptoms and they should not be used to treat such conditions.) Osteoporosis (abnormally low bone mass). Atrophic vaginitis. Kraurosis vulvae. Female castration.

PREMARIN (conjugated estrogens) Vaginal Cream is indicated in the treatment of atrophic vaginitis and kraurosis vulvae.

PREMARIN HAS NOT BEEN SHOWN TO BE EFFECTIVE FOR ANY PURPOSE DURING PREGNANCY AND ITS USE MAY CAUSE SEVERE HARM TO THE FETUS (SEE BOXED WARNING).

Concomitant Progestin Use: The lowest effective dose appropriate for the specific indication should be utilized. Studies of the addition of a progestin for 7 or more days of a cycle of estrogen administration have reported a lowered incidence of endometrial hyperplasia. Morphological and biochemical studies of the endometrium suggest that 10 to 13 days of progestin are needed to provide maximal maturation of the endometrium and to eliminate any hyperplastic changes. Whether this will provide protection from endometrial carcinoma has not been clearly established. There are possible additional risks which may be associated with the inclusion of progestin in estrogen replacement regimens. (See PRECAUTIONS.) The choice of progestin and dosage may be important; product labeling should be reviewed to minimize possible adverse effects.

CONTRAINDICATIONS: Estrogens should not be used in women (or men) with any of the following conditions: 1. Known or suspected cancer of the breast except in appropriately selected patients being treated for metastatic disease. 2. Known or suspected estrogen-dependent neoplasia. 3. Known or suspected pregnancy (see Boxed Warning). 4. Undiagnosed abnormal genital bleeding. 5. Active thrombophlebitis or thromboembolic disorders. 6. A past history of thrombophlebitis, thrombosis, or thromboembolic disorders associated with previous estrogen use (except when used in treatment of breast or prostatic malignancy).

WARNINGS: Estrogens have been reported to increase the risk of endometrial carcinoma (see Boxed Warning). However, a recent large, case-controlled study indicated no increase in risk of breast cancer in postmenopausal women. A recent study has reported a 2- to 3-fold increase in the risk of surgically confirmed gallbladder disease in women receiving postmenopausal estrogens.

Adverse effects of oral contraceptives may be expected at the larger doses of estrogen used to treat prostatic or breast cancer or postpartum breast engorgement, it has been shown that there is an increased risk of thrombosis in men receiving estrogens for prostatic cancer and women for postpartum breast engorgement. Users of oral contraceptives have an increased risk of diseases, such as thrombophlebitis, pulmonary embolism, stroke, and myocardial infarction. Cases of retinal thrombosis, mesenteric thrombosis, and optic neuritis have been reported in oral contraceptive users. An increased risk of post-surgery thromboembolic complications has also been reported in users of oral contraceptives. If feasible, estrogen should be discontinued at least 4 weeks before surgery of the type associated with an increased risk of thromboembolism, or during periods of prolonged immobilization. Estrogens should not be used in persons with active thrombophlebitis, thromboembolic disorders, or in persons with a history of such disorders in association with estrogen use. They should be used with caution in patients with cerebral vascular or coronary artery disease. Large doses (5 mg conjugated estrogens per day), comparable to those used to treat cancer of the prostate and breast, have been shown to increase the risk of nonfatal myocardial infarction, pulmonary embolism, and thrombophlebitis. When doses of this size are used, any of the thromboembolic and thrombotic adverse effects should be considered a clear risk.

For atrophic vaginitis

PREMARIN® (conjugated estrogens)

Vaginal Cream
0.625 mg/g



Benign hepatic adenomas should be considered in estrogen users having abdominal pain and tenderness, abdominal mass, or hypovolemic shock. Hepatocellular carcinoma has been reported in women taking estrogen-containing oral contraceptives. Increased blood pressure may occur with use of estrogens in the menopause and blood pressure should be monitored with estrogen use. A worsening of glucose tolerance has been observed in patients on estrogen-containing oral contraceptives. For this reason, diabetic patients should be carefully observed. Estrogens may lead to severe hypercalcemia in patients with breast cancer and bone metastases.

PRECAUTIONS: Physical examination and a complete medical and family history should be taken prior to the initiation of any estrogen therapy with special reference to blood pressure, breasts, abdomen, and pelvic organs, and should include a Papanicolaou smear. As a general rule, estrogen should not be prescribed for longer than one year without another physical examination being performed. Conditions influenced by fluid retention, such as asthma, epilepsy, migraine, and cardiac or renal dysfunction, require careful observation. Certain patients may develop manifestations of excessive estrogenic stimulation, such as abnormal or excessive uterine bleeding, mastodynia, etc. Prolonged administration of unopposed estrogen therapy has been reported to increase the risk of endometrial hyperplasia in some patients. Oral contraceptives appear to be associated with an increased incidence of mental depression. Patients with a history of depression should be carefully observed. Pre-existing uterine leiomyomata may increase in size during estrogen use. The pathologist should be advised of estrogen therapy when relevant specimens are submitted. If jaundice develops in any patient receiving estrogen, the medication should be discontinued while the cause is investigated. Estrogens should be used with care in patients with impaired liver function, renal insufficiency, metabolic bone diseases associated with hypercalcemia, or in young patients in whom bone growth is not yet complete. If concomitant progestin therapy is used, potential risks may include adverse effects on carbohydrate and lipid metabolism.

The following changes may be expected with larger doses of estrogen:

- Increased sulfobromophthalen retention
- Increased prothrombin and factors VII, VIII, IX, and X, decreased antithrombin 3, increased norepinephrine-induced platelet aggregability
- Increased thyroid binding globulin (TBG) leading to increased circulating total thyroid hormone, as measured by PBI, T_4 by column, or T_4 by radioimmunoassay. Free T_3 resin uptake is decreased, reflecting the elevated TBG; free T_4 concentration is unaltered.
- Impaired glucose tolerance
- Decreased pregnandiol excretion
- Reduced response to methylparathion
- Reduced serum folate concentration
- Increased serum triglyceride and phospholipid concentration

As a general principle, the administration of any drug to nursing mothers should be done only when clearly necessary since many drugs are excreted in human milk.

Long-term, continuous administration of natural and synthetic estrogens in certain animal species increases the frequency of carcinomas of the breast, cervix, vagina, and liver. However, in a recent, large case-controlled study of postmenopausal women there was no increase in risk of breast cancer with use of conjugated estrogens.

ADVERSE REACTIONS: The following have been reported with estrogenic therapy, including oral contraceptives: breakthrough bleeding, spotting, change in menstrual flow, dysmenorrhea, premenstrual-like syndrome, amenorrhea during and after treatment, increase in size of uterine fibromyomata, vaginal candidiasis, change in cervical erosion and in degree of cervical secretion, cystitis-like syndrome, tenderness, enlargement, secretion (of breasts), nausea, vomiting, abdominal cramps, bloating, cholestatic jaundice, chloasma or melasma (which may persist when drug is discontinued), erythema multiforme, erythema nodosum, hemorrhagic eruption, loss of scalp hair, hirsutism, sleepiness or corneal curvature, intolerance to contact lenses, headache, migraine, dizziness, mental depression, chorea, increase or decrease in weight, reduced carbohydrate tolerance, aggravation of porphyria, edema, changes in libido.

ACUTE OVERDOSEAGE: May cause nausea, and withdrawal bleeding may occur in females.

DOSAGE AND ADMINISTRATION:

PREMARIN® Brand of conjugated estrogens tablets, USP

1. Given cyclically for short-term use only. For treatment of moderate-to-severe vasomotor symptoms, atrophic vaginitis, or kraurosis vulvae associated with the menopause (0.3 mg to 1.25 mg or more daily). The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible. Administration should be cyclic (eg, three weeks on and one week off). Attempts to discontinue or taper medication should be made at three- to six-month intervals.

2. Given cyclically. Osteoporosis. Female castration. Osteoporosis — 0.625 mg daily. Administration should be cyclic (eg, three weeks on and one week off). Female castration — 1.25 mg daily, cyclically. Adjust upward or downward according to response of the patient. For maintenance, adjust dosage to lowest level that will provide effective control.

Patients with an intact uterus should be monitored for signs of endometrial cancer and appropriate measures taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

PREMARIN® Brand of conjugated estrogens Vaginal Cream

Given cyclically for short-term use only. For treatment of atrophic vaginitis or kraurosis vulvae.

The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible.

Administration should be cyclic (eg, three weeks on and one week off).

Attempts to discontinue or taper medication should be made at three- to six-month intervals.

Usual dosage range: 2 g to 4 g daily, intravaginally, depending on the severity of the condition.

Treated patients with an intact uterus should be monitored closely for signs of endometrial cancer and appropriate diagnostic measures should be taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

References:

- Lindsay R, Hart DM, Clark DM. The minimum effective dose of estrogen for prevention of postmenopausal bone loss. *Obstet Gynecol* 1984;63:759-763.
- Sludd JWW, Thom MH, Paterson MEL, et al. The prevention and treatment of endometrial pathology in postmenopausal women receiving exogenous estrogens. In Pasetto N, Paoletti R, Ambrus JL (eds) *The Menopause and Postmenopause*. Lancaster, England: MTP Press Ltd, 1980, chap 13.

© 1987 Ayerst Laboratories
All rights reserved

6437/587

Ayerst

AYERST LABORATORIES
New York, NY 10017

THE NEBRASKA MEDICAL JOURNAL

The Biopsy

AMANDA Beiner was up before the alarm and in the shower by 5:00 a.m. This was the first day of her two week vacation and by this evening she would be in Key West, Florida. There were just a few last minute errands to run before her plane left at 1:30 and she did not intend to be late. When the laundry opened at 9:00, she wanted to pick up her black evening dress and at 10:00 she had an appointment with Dr. Bennet for a refill on her allergy medication. Then her girlfriend Mildred was to pick her up at noon and take her to the airport. She deserved this vacation and had been looking forward to it for a long time. After the pressures of the billing department where she was a supervisor, this would be a paradise of leisure and relaxation. In fact, she intended to do nothing but soak up the sun, take long leisurely walks on the beach and perhaps meet a charming, gentleman or two.

The appointment with Dr. Bennet was really not necessary and she had tried to explain that to the nurse. After all, she had been taking novafed for her allergy since last year and simply wanted to make sure that she had enough capsules should she need them on the trip. The nurse had insisted, however, that since this was the third and final refill on the present prescription, she would need to see the doctor before he could write another one. That was all right. It was an inconvenience and would be an extra expense, but she was too happy this morning to let a little thing like that upset her day.

By 9:00, she was waiting at the cleaners, got her dress and was back in the car by 9:15. She had another 45 minutes before her doctor's appointment and thought about stopping for some coffee and donuts, but then decided to save her figure and perhaps some time as well by going directly to the clinic. She really couldn't afford to lose much time this morning and perhaps if she got there early they would take her in before 10:00. Then she would have plenty of time to get back home and finish

J. H. BUCHANAN, Ph.D.

Associate Professor, Department of Philosophy,
University of Akron, Akron, Ohio 44325

some last minutes details before Mildred came at noon.

Doctor's Clinic was somewhat of a pretentious building built in the shape of a semi-circle with a garden in the center and office suites around the periphery. It was very nice and pleasant enough to visit, but the entire project must have cost a great deal to build and every time Amanda paid \$35.00 for an office visit, she felt that she was also paying for another inch or so of that real estate. Dr. Bennet's office was on the first floor and faced the tropical side of the garden view. There was no doubt that his office was one of the most impressive in the entire complex. She knew that he was a senior physician in the Clinic and this probably explained some of the privileges that he enjoyed. The rumor was that he was very powerful in hospital politics and that no one dared to cross him in the medical community. Whether the rumor was true or not, she couldn't be sure but that was what Mildred had said and she should certainly know.

Her best friend Mildred had been married to a doctor for nearly five years before they were divorced. She was out of touch now, but used to know a lot about what was going on and she was the one that had recommended Dr. Bennet in the first place. He was supposed to be a brilliant diagnostician and an expert in internal medicine. Also, Mildred said, if you needed special treatment or care, then Robert Bennet was the doctor to have because he knew all the experts in the area. So, three years ago, Amanda went to him for a strep throat and

had been going back ever since. She liked him and he cured her strep throat, but he was not a doctor that sat down and talked to you like some of them did. In fact, he always seemed to be in such a hurry that she hardly ever asked questions for fear of offending him and so she was content to let him examine her, prescribe some medication and leave without saying more than a few words. It was all right because she understood that doctors were very busy people and couldn't be expected to sit around and chat all day with their patients.

II.

The office was very crowded that day and she was glad she had arrived early. It turned out that she didn't get in to see the doctor any sooner than her appointment, but it might have been even later if she had not arrived until 10:00. The nurse showed her to one of the examination rooms and put her chart on the desk. At first, she was tempted to look at the file to see what had been written about her, but then thought better of it. It would be embarrassing if the doctor came in and caught her reading her own file.

By 10:20, Amanda was getting nervous and very worried about the time. She knew that the doctor was busy, but if he would just come in and write out the prescription, then she could be on her way to Key West and begin her vacation. She hoped that it wouldn't be too much longer because if she missed her plane, she was in real trouble. Delta Airlines had started a promotion several months ago that allowed you to buy a ticket at half the regular fare as long as you left and returned on the scheduled day. There were no refunds for missed flights and no schedule transfers. She had to be on that plane. But instead of getting upset, Amanda decided to distract herself by counting the cinder blocks on the examination room wall. There were 19 across and each looked to be about 11 or 12 inches long, so the wall was probably twenty feet long. Then there were 16 bricks down and each one was about 6" wide so the wall was probably 8 feet. Now, if she multiplied the number of bricks across by the ones up and down, then she could figure the number of bricks in the wall and its volume. She was about to start on the far wall, when she heard someone grab the doorknob from the other side and start to enter the room. Her heart gave a little jump and she forgot all about

the cinder blocks. Then the knob was released and whoever it was went away. In a few minutes, however, she heard the knob turn again and Dr. Bennet was telling someone that he would call Mr. Edmondson as soon as he got the time. The doctor sounded a little irritated and somewhat rushed. What that, he entered the room smiling, but didn't greet her or say hello. Amanda was not really offended and in fact she felt bad to be taking up his time on a day when he was so busy.

Hello, doctor. I'm sorry to be bothering you with this. I just need a refill on my novafed.

She felt the need to further explain herself because she did not want him to blame her for wasting his time.

I told your nurse not to bother you, but she said that I had to come in because this was my third refill. I'm sorry to be so much trouble.

Surprisingly, this neither softened his composure nor seemed to endear him to her as she hoped it would. In fact, he appeared distant and a little more professional than usual.

Yes, Mrs. Wilkinson was quite right in having you come in this morning. We do not like to have our patients on any medication without checking from time to time to see how they are doing.

Oh, I'm doing just fine she said. Then her face brightened and she added, I am going on vacation today.

You are?

He seemed genuinely happy for her and this made Amanda feel warm all over. She liked him; she really did. He was just busy and she should not take things so personally when they weren't meant to be. As he checked her pulse, felt her glands and examined her ears, she chatted on about Key West and her plans for the next two weeks.

She thought the examination was all over, but then he asked her about the mole on her neck. Moments before he had been examining its brown, rubbery surface but she thought that he was just looking into her ears or still feeling her glands. She was not alarmed that he would ask, just somewhat curious since no one had ever said anything about the mole before.

Oh, that? she laughed, I've had it for years. It's nothing.

Have you noticed it change shape or size?

Well, . . . no . . . she replied somewhat hesitantly . . . but then it's hard to see up there on my neck so I don't pay much attention to it.

Well, I think we'd better have a section of that for the lab just to be safe.

Why? she asked and noticed an ever so slight tremble in her voice as she did so, *What do you think it is?*

Probably nothing, he replied, *just being cautious.*

Still, there was an edge to his voice and he seemed to have already made up his mind about the mole without even waiting to hear her explanations. She wanted to tell him that she had the mole when she was a child, that it never grew or hurt or bothered her and that he need not bother with it. It was nothing, she reassured herself, and she wanted to reassure him as well. But by the time she was ready to explain all of this, he had already laid out his biopsy instruments and turned the dome-shaped examination lamp to shine directly on the mole. There was no time for explanations and he was determined to do what he wanted to despite her feelings about the matter. In fact, she felt discounted and even dismissed as having anything relevant to say since apparently only his judgment counted and he had made up his mind. She felt that she had to stop him or at least to discuss the matter first. In either case, she needed time to think because this was so unexpected and she was so unprepared for it. After all, only five minutes ago Amanda was about to leave for Key West, Florida and had only stopped in for allergy medication. And now this.

Wait a minute, she said and shielded the mole with her hand, *I want to talk about this, doctor.*

There is nothing to talk about, he replied. *You have a suspicious looking mole on your neck and it needs to be removed.*

Why, she asked.

Why? he replied in rhetorical surprise. *Because it could be malignant.*

Her heart skipped a beat and she felt a line of cold sweat form upon her upper neck. Had she heard him correctly?

You mean that I have cancer?

I didn't say that, he replied with some irritation in his voice. *You did. All I said was that you have a very suspicious looking mole on your neck and as your physician it is my duty to strongly advise biopsy at the earliest possible moment. If you wish to consult another physician, you may do so. You are also free to do nothing, but I will not be held responsible for the consequences.*

Amanda could feel terror rising in her blood like an icy draft which turned the body cold and numbed her fingertips with fear. The trembling of her voice had become a shudder and she felt an ominous blade of death strike somewhere within her.

The consequences? My God, what are the consequences? Could I die? Is that what you're saying?

Miss Beiner, you are making entirely too much out of this. At this stage, we are simply doing a biopsy. Should there be anything more involved than that, pathology will let us know. Now shall we go ahead since I also have other patients to treat.

What are the consequences? I want to know. I have a right to know the truth.

Very well, but Bennett's voice was weary and he spoke with resignation that contained his anger while revealing it as well. *Very well then, since you insist on knowing the details, I will tell you. The greater probability is that this small mole is unremarkable and benign. If that is the case, then you will simply be rid of it and that is the end of that. However, should the mole be malignant-what we call a malignant melanoma-then it is important for us to act with all due haste. If there is satellitosis-in other words metastasis-then we would want to refer you to our oncology team for further treatment.*

Could I die?

Yes, if this turns out to be a melanoma, there is a chance of that happening.

How good of a chance. Tell me the percentages.

Well, we can't always be on the money with these statistics but malignant melanoma is fatal within a five year period for 80% of the patients diagnosed.

She was so absolutely stunned that it took nearly a full minute before she could completely comprehend what he had just told her. Then, as if anesthetized by the possibilities which overwhelmed her, she merely nodded in a mechanical way and told him to go ahead and do the biopsy.

She could feel no pain, but there was a dull, dead sensation as the anesthetized tissue was being pulled and tugged free of her body. She distinctly felt a hollow sense of emptiness that threatened to become an uncontrollable hysteria if she allowed it. And yet this violation that she experienced was not that of being raped — which is simply brutal violence — but rather being violated in the sense of being transgressed and trespassed upon. Something had been stolen from her and would now be held in judgment — examined by pathologists and specialists — and a decree would be made about her future and her fate. Within the silver kidney pan of bloody tissue, there rested a decision about the rest of her life and she could neither counsel nor argue in her own behalf. Now the tissue would do that for her. If its defense was weak or found wanting, then she would be the one indicted and by men she neither knew nor with whom she could argue or plead. For the next few days, her destiny lay in the hands of such anonymous strangers and she would simply have to passively endure the days until they rendered their judgment. Amanda barely recalled leaving the office and hardly heard the receptionist tell her that the doctor would call when the results were back.

III.

Her vacation was ruined, of course. She could hardly go to Key West with this hanging over her head. Mildred was already at the apartment and in a state of great excitement since it was now nearly 1:00. Amanda had no energy left and certainly not enough to tell Mildred the truth and then endure the flood of pity, concern and maternalism that would follow. She lied and it was not even a very good lie just to get rid of Mildred. Now all she wanted to do was to fall upon the bed and sleep, forget, and wake up to discover that it had all been a terrible nightmare and she was going to Florida after all.

When she looked at the bedside clock several hours later, it was dark in the room and

only the luminescent dial stood out. She drifted in and out of her dreams for a few minutes and then recalled the events of the afternoon. Did she have cancer? Would she die? How did she get this cancer? Could she - anyone - suddenly get such a horrible disease when they had otherwise led a good and healthy life? She looked at the clock; it was nearly 10:30 in the evening. Soon it would be time to go to bed except she had spent the whole afternoon in bed and now was too weary to fall asleep again.

Her mind tortured her with self-doubts, with nightmares of death, and dreams of incredible pain and agony. Each one of us fears that unexpected moment when our well-ordered and perfectly paced lives will suddenly dissolve into chaos and disaster. For Amanda that day had arrived and she was desperately seeking to re-establish some equilibrium and balance in her life. Hours before, her world had been orderly, regular and controlled but now everything was crumbling before her.

She had the whole night before her but could not sleep. Wandering into the living room, she suddenly remembered the copy of the Merck Manual she had bought the summer before at a garage sale and decided to look up her disease. It was her disease now — or perhaps she belonged to it — and she had to know what it was, what it did to you and whether it was kind or cruel, chronic or acute, deadly or benevolent. Leafing frantically through the index, she covered with one sweep of the eye a whole list of maladies beginning with **M: Megacystis syndrome, Megakaryocytes, Megaloblastic anemias, Megaloureter, Meibomian gland, Melancholia, Melanocyte-stimulating hormone, Melanoma, malignant**. There it was: **Melanoma, malignant 2074**. Her fingers trembled as she quickly turned the thin, onion-skinned pages in search of information that would either give her reassurance or plunge her further into despair:

Malignant Melanoma: A malignant tumor of melanocyte origin. Malignant melanomas arise in areas of the skin, mucous membranes, eye, and CNS where pigment cells occur. They appear in different sizes, shapes, and shades of color (most commonly pigmented), and have a variable propensity for invasion and metastasis. Thus, malignant melanoma may be a highly malignant tumor that spreads so rapidly it is fatal within

months of recognition, while in some forms the 5-yr cure rate is nearly 100%. Early clinical suspicion and an adequate biopsy for histologic determination of the level of invasion are important for effective management and for optimum prognosis.

Amanda laid the book down slowly while staring vacantly off into space. She had it! She had a malignant melanoma and she was going to die. There was absolutely no doubt left in her mind and any hope to which she might have clung was destroyed by the list of symptoms given. There was no cure and there was no hope. A few hours before her world had been perfect and she was on her way to Key West and now she was alone and dying. Life wasn't fair.

IV.

Somehow Amanda got through the rest of the weekend although she never quite knew how. The seconds, minutes, half-hours, and hours ticked away as if time were a glutinous, heavy flow weighted down by its own inertia. All she could think about was the arrival of Monday morning when Dr. Bennet's office would open and she could call about her test results. Over the weekend the whole matter had already been decided by some anonymous and indifferent technician whose entire interest in her future was purely academic. Having examined her tissue sample and condemned her to a miserable death he no doubt went home to enjoy an evening cocktail, perhaps had friends over for cards, make love to his wife and slept a restful sleep. Meanwhile Amanda paced the floor at 3:00 in the morning, took a dozen aspirins, recanted her sins and rehearsed the horrors that awaited her. But Dr. Bennet read the Sunday papers, watched a football game and gave no thought whatsoever to Amanda Beiner and the disastrous fate that awaited her. No one cared and no one wished to bother with her concerns. In medicine, one soon learns that patients can't be rescued from their fears.

At 8:30 on Monday morning, Amanda called the office. The phone rang several times and then a pleasant, rather uplifting voice announced:

Hello, this is Nancy in Dr. Bennet's office. We are out of the office at the moment. If this is an emergency please call 678-9094. If you wish to make an appointment please call back during

regular office hours. If you need to leave a message, please . . .

She threw the phone down in exasperation and looked at the clock again. It was 8:35. She would need to wait another 25 minutes before the office opened. Amanda went to make some coffee and tried not to think about the biopsy report. If it was malignant, they probably wouldn't tell her over the phone — they never did — instead they would have the doctor call her back or maybe make her come into the office. That's the way it was handled if the news was bad.

At exactly 9:00, she dialed the office number. It was busy. She hung up and tried again. Busy again. After three more attempts, Amanda was so frustrated that she just kept dialing and redialing over and over again until finally after another twenty minutes she got through.

Good morning. This is Dr. Bennet's office. May I help you?

Yes, yes, Good morning, this is Amanda Beiner.

Yes, Miss Beiner?

I'm calling about my test results. Last week I was in and . . .

One moment please . . .

The voice had interrupted her in mid sentence and was now replaced with music from one of those easy-listening stations. She waited on the other end with a mounting excitement and dread which increased as each moment passed. Then without warning the music stopped and the voice came back on the line.

This was for a glucose-tolerance test wasn't it? No! No! It was . . . it was a biopsy of a mole that . . . Hold please!

The music reappeared just as the voice dissolved and she waited for nearly another five minutes before the exchange of music and voice reasserted itself again.

Miss Beiner? Doctor is on hospital rounds this morning but he'll call you when he returns to the office. Thank you.

But when will that be . . . I may . . .

But it was too late. The voice was gone and Amanda was simply talking to a buzzing dial tone.

She waited the rest of Monday morning and all that afternoon for Dr. Bennet's call. In fact, the phone did ring twice throughout the day and each time Amanda jumped at the first ring and answered on the second. But neither time was it Dr. Bennet calling. The first call was a wrong number and the second was the Olin Mills Photographic Studio calling to promote a special offer.

Is this Amanda Beiner?

Yes, yes, Thank you for calling, Dr. Bennet. What did my test result show? I'm all right, aren't I? It was just a simple mole, wasn't it?

Excuse me, Miss Beiner, this is the Olin Mills Photographic studio and we are pleased to announce that you have won an 8 x 10 framed portrait of yourself or a loved one.

What? Amanda could hardly believe what was happening — who did you say you were?

This is Sally from the Olin Mills Photographic Studios calling to offer you a free . . .

Damned you! Damned you, she screamed as the phone was thrown back into its plastic cradle.

Amanda had stayed home all morning and all afternoon anticipating Dr. Bennet's call at any moment. But now it was 5:00; the office was closed and he would not call anymore today. The rest of the evening stretched before her and she was not sure that she could make it through the lonely night.

Tuesday morning she was awake by 5:00 and dragged herself out of bed to make some coffee. It would be another four hours before the office opened, but she simply could not sleep anymore. Without realizing it, her entire life had started to involuntarily revolve around Bennet's office schedule and the only things she now thought about were the times that he would be available and perhaps trying to reach her by telephone. Her whole life was a wreck and would remain so until she finally got some information about the biopsy report. But he did not call on Tuesday and although Amanda made a concerted effort throughout the morning not to call him, she finally could stand the suspense no more and by 3:00 that afternoon gave into her terror and exasperation. She dialed the office number.

Good afternoon, this is Dr. Bennet's office.

Yes, yes, hello, this is Mandy Beiner. Is Dr. Bennet there, please.

Why no, Miss Beiner, Doctor has been called into emergency surgery at the hospital. May I help you?

It's about my test results. Do you have them? Could you tell me whether the mole was . . . whether it was . . . alright . . . whether it was normal?

Didn't Doctor call you about those results, Miss Beiner? I reminded him yesterday.

No, no he didn't. Is there anything wrong?

Well, I'll just have to remind him again this afternoon and I am sure he will be back to you as soon as possible. Thank you for calling again, Miss Beiner, and I am sorry for this confusion.

That was it. She had cancer. She knew that she had cancer. They don't talk to you like that unless you're dying but the nurse isn't permitted to say anything. She has to wait for the doctor to tell you. Amanda slumped into the chair and suddenly felt very old and very exhausted by this entire ordeal.

By Wednesday morning, her frustration and depression had turned to fury and anger. It had been nearly a week since the biopsy; her vacation was ruined; she was probably dying of cancer; and she couldn't even get through to the doctor. At 9:00 that morning she would call him and finally get this whole thing settled. She was not going to spend another sleepless night waiting in suspense. And indeed, at exactly 9:00 to the second, she dialed the office number once again. Thank God, it was not busy this time and within minutes a voice on the other end began speaking in a formal and very carefully rehearsed manner.

This is Dr. Bennet's office. We are not in the office on Wednesdays, but will resume normal office hours tomorrow. If you have an emergency, please call . . .

It was Wednesday! Damned it was Wednesday! She had completely forgotten all about Wednesdays and there was no way she could be in touch with Bennet today. Now she would have to wait until Thursday morning, but she no longer knew if her frayed and disintegrated nerves could last that long. She had looked at the information in the **Merck Manual** at least a dozen times in search of reassurances and each time she was simply thrown into

greater terror and disappointment. She had barely slept at all in the past week and when she did finally drift off in the early morning, it was to such terrible dreams that she was always awakened within the hour. It was too much. It had all been too much and if she was actually dying of this terrible melanoma disease, then she had a right to know. Was Dr. Bennet so indifferent to her feelings that he did not care or did he rather take some strange and perverse pleasure in making her wait? She could not decide which it was.

On Thursday morning, she called the office promptly at 9:00.

Good morning, Amanda said with a steady and controlled voice that even surprised her, I want to speak with Dr. Bennet.

I'm sorry Miss Beiner, but Doctor is not expected in the office until noon. May I have him call you when he returns?

In that case, I would like to make an appointment to see him as soon as possible.

Very well — the voice had suddenly turned hard and cold — please hold.

Before Amanda could say another word, the voice disappeared to be replaced with easy listening music. Seconds, minutes ticked away and she was about to hang up when suddenly the voice reappeared again.

Miss Beiner? Yes, thank you for waiting, I have a cancellation on the 26th, Doctor can see you then at 3:30.

The 26th? — Amanda nearly screamed into the phone — that's nearly a whole week away.

Yes, the calm and collected voice confirmed, Doctor is booked up until then. Of course, if there is a cancellation, I could call you if you like.

That won't be necessary, and Amanda once again surprised herself at her own assertiveness — I will be over a few minutes and wait in the office until he does have time.

Miss Beiner, I have already told you that Doctor does not have a vacancy for you this afternoon . . .

But Amanda had already hung up the phone and was on her way out of the door.

V.

It took Amanda less than ten minutes to

reach Dr. Bennet's office. She parked the car and entered the reception area to find it filled with waiting patients. Mrs. Wilkinson was already peering out from behind the glass partition, she briefly smiled as Amanda entered, and then lowered her eyes again. Sitting down directly in front of the glass window, Amanda picked up a copy of **People** magazine and began intently reading an article on Paul Newman. She could feel cold eyes staring at her, but nothing was said for nearly another half hour when the receptionist appeared beside her.

Good morning, Miss Beiner.

Good morning, Amanda replied and went back to her reading.

I believe I told you on the phone that Doctor does not have an opening for you today, but if you would like me to check the appointment book I could probably . . .

That won't be necessary, Amanda curtly interrupted. I'll wait right here until the Doctor does have time to see me.

I am afraid you may have a rather long wait Miss Beiner.

That will be just fine, Amanda looked up with a smile to emphasize the point.

As you wish, Miss Beiner.

By 11:00, she had finished reading all of the magazines on the side table including the latest **Reader's Digest**, three issues of **People** magazine and a promotional copy of **Travel**. She excused herself to an elderly couple sitting nearby and took away three magazines on their table as well as a daily news paper left behind by a young man. By 12:00, the room was completely empty except for Amanda who had finished everything in sight and was about to search for more. But as she was doing so, the lights suddenly went out and Mrs. Wilkinson appeared once more beside her.

I am sorry Miss Beiner, but you'll have to leave now. We're closing for lunch.

Very well, Amanda calmly replied while rising to get her coat, when do you open again?

Well, at 1:30, but really Miss Beiner I do wish . . .

Thank you . . . I'll be back then.

At 1:30, she was sitting in her car and saw

the office staff return and park near the back door. She waited a moment more and then opened the office door, resumed her original seat and began reading an old issue of **Cosmopolitan**. She could feel the cold, unbending eyes of Mrs. Wilkinson bearing down upon her once again, but soon they released her with a dull thud as the office filled up once again with patients.

Amanda was angry, to be sure, and she was also exasperated, frustrated and anxious. But most of all she was frightened. In fact, she was so frightened that nothing else mattered except her test results. She didn't care whether she ate or slept or even whether she was now wasting her time sitting all afternoon in an office without an appointment. All that mattered were the test results and to finally know whether she was dying or not. She could wait forever — if she had to — because there was no where else to go until the matter was settled. And, in fact, it looked as if she might just have to wait forever. By 3:30 that afternoon, there had passed through the Doctor's office no less than 30 patients and they had all gone before her despite the fact that Amanda had been in the same chair for nearly six hours. By 4:30, she was convinced that she would not get in that day and would need to return on Friday morning. But at 4:45 the last patient left the office and she looked up to see Mrs. Wilkinson smile and then announce in a perfectly normal manner that . . . *the doctor will see you now*. With no further explanation than that, Amanda found herself ushered into the same examination room where she had sat nearly a week before.

VI.

Dr. Bennet entered the room a few moments later. He looked rushed and distracted — as he had the week before — but smiled nonetheless and began intently to examine a slip of paper clipped to her file. Amanda watched his face carefully — it betrayed neither concern nor relief — but instead a brittle weariness that turned her anger to sympathy. For several minutes more he stared in silence at the report, then leafed ahead through her file to another slip of paper which he examined just as intently while comparing the two. She was on the verge of screaming in despair when he calmly spoke instead.

Yes, yes — he muttered as if speaking to himself — these results are perfectly normal.

Then looking up and seeing her as if for the first time, he smiled and headed for the door.

You're fine, he said and opened the door to leave.

Wait a minute, Amanda interrupted his movement, *do you mean that I don't have cancer?*

Why, yes of course — he seemed surprised and somewhat startled — that's exactly what I mean. Why should you think otherwise?

Before she could say another word, the door closed quietly and he was gone.

For several long minutes, Amanda sat staring at the closed door and then began to cry. She had no idea what she was crying about but with every aching sob her body seemed to bleed in relief the terrible poisons which had accumulated within her for the past week. Finally, there was nothing left to cry out and she rose as if in a daze to seek the same escape through which Dr. Bennet had exited.

Passing down the darkened corridors of examination rooms and out into the vacant reception area, she passed the glass partitioned office. Amanda was nearly to the door when Mrs. Wilkinson called out.

Miss Beiner?

Yes? Amanda Answered.

That will be forty today. Do you want us to bill you or receive your discount for paying today?

She heard the words, but they made no sense and had no meaning. She turned to see Mrs. Wilkinson smiling back and then turned again toward the door, passed through, and walked to her car. Driving home in a daze, she was barely aware of having arrived and sat for several more minutes in startled slumber before opening the car door, finding her apartment key and falling exhausted upon the daybed.

VII.

When she awoke hours later, it was dark outside and raining with a light mist against the windowpane. For several minutes she could not recall where she was and for several more she was still uncertain whether the

events of that afternoon had actually occurred. But what did it matter and what did it mean? Why did it happen and what could she do about it now?

Life is so odd! Yesterday, she was dying. Today, she was well. What about tomorrow? What about the next time she went to see Dr. Bennet? Would it be something else again? Would he remember and would he be angry? Was she angry? Had she done something wrong to him or had he done something to her?

These questions could be endless and there were no answers. At least, there were no certain and absolute answers. On the one hand, Dr. Bennet had ruined her only vacation of the year and over something that had turned out to be nothing. On the other hand, he was just being cautious and a good doctor. But then again, Mrs. Wilkinson had played a game with her — hadn't she? — it certainly seemed she had. But who could really tell? The whole issue was whether or not she had been intentionally harmed — that's probably the way a lawyer would put it — and that was an impossible question to really answer. It depended in part upon the actual intention of the people involved and you could never be sure about people's motives. Sometimes they lied and sometimes they didn't even know themselves what they were doing. Take Mrs. Wilkinson.

Was she simply doing her job or was she unnecessarily cruel? Was Dr. Bennet ignoring her repeated messages out of insensitivity or because he was too busy?

Finally, Amanda had to wonder even about herself. After all, she was the one who blew the whole thing out of proportion and Dr. Bennet had warned her about this. Was it his fault that she thought the worst and decided on the spot that she had cancer and was it his fault that she had tried to call on Wednesday and at times when no one was in the office?

Life is odd. What is to be done about such things? Forget them? Become bitter? Seek revenge? Amanda did not even know what she felt at the moment let alone how she would feel in the next few days or few weeks. But there was one thing of which she was certain and that was that something had died within her never to be recreated or resurrected again. It was more than the simple loss of trust and confidence in people. Rather, there was a hollow place within her that now felt less and cared less about others. Perhaps it was a protective screen or perhaps a simple indifference, but in any case she would never quite care as much again, never quite allow herself to become so dependent again, and certainly never to so fully trust anyone again.

Gastric Stromal Tumors

STROMAL tumors, formerly classified as leiomyomas or leiomyosarcomas, represent a rare neoplasm of the gastrointestinal tract. The past use of the term leiomyoma or leiomyosarcoma originated from the thought that these tumors arose from gastric musculature; histologically, these tumors often showed a prominent spindle cell pattern.¹ However, further investigations of the tumors revealed immunohistochemical and electron microscopy features not consistent with tumors of smooth muscle origin; thus, the more general classification of stromal tumors appears more accurate.^{1, 2}

While these tumors may appear anywhere along the alimentary tract, the stomach is the most common gastrointestinal site. Of these gastric stromal tumors, about 75% are benign.² Furthermore, although the tumors are often viewed as the same as uterine leiomyomas, they bear little resemblance to their uterine counterparts. The significance of gastric stromal tumors lie in the fact that the clinical manifestations are much the same as gastric adenocarcinoma.² Thus, surgeons should be aware of the features of gastric stromal tumors. The purpose of this paper is to describe a case of a gastric stromal tumor, and discuss the surgical management, as well as the evolving histological identification.

Report of Case

A 57-year-old white female was transferred from a rural hospital with a preliminary diagnosis of small bowel obstruction. She presented with a four-day history of intermittent abdominal pain and chills, though the patient was afebrile on admission. Her past medical history included a hemicolectomy with a temporary colostomy for severe diverticular disease in 1982, subsequently followed up with reanastomosis. Hypothyroidism controlled with medication had been present for many years.

On physical exam, the patient had a slightly distended abdomen, rare to absent bowel sounds, diffuse tenderness, and palpable left upper quadrant mass. Computerized Tomography (CT) exam of the abdomen revealed a 10 cm. mass on the greater curvature of the stomach. There was no adenopathy present.

MICHAEL J. MCGAHAN, M.D.

Family Practice Resident, Lincoln Family Practice Program, 4600 Valley Road, Lincoln, Nebraska 68510

RICHARD J. WINDLE, M.D.

General Surgeon, 2221 South 17th Street, Suite 106, Lincoln, Nebraska 68502

AINA I. SILENIEKS, M.D.

Pathologist, 1919 South 40th Street, Suite 333, Lincoln, Nebraska 68506

With the probability of gastric carcinoma being high, exploratory laparotomy was scheduled. At the time of operation, a 12-15 cm. mass was found on the posterior aspect of the stomach. The tumor projected into the mesentery and was adherent to the transverse mesocolon. The tumor was resected along with a small portion of the greater curvature of the stomach. There was no evidence of metastasis or adenopathy upon further inspection.

Frozen section revealed gastric stromal tumor, histologically malignant, and the abdomen was closed without complications or further intervention. The patient had an uncomplicated 11 day post-operative recovery period and was dismissed from the hospital. At this time, the patient is well and without further sequelae at 10 weeks status post partial gastrectomy. She is being followed with CT scan of the abdomen monthly.

Discussion

The classification of gastric stromal neoplasms has traditionally been divided into five groups: (1) mixed epithelioid and spindle cell tumors, benign and malignant, including the types epithelioid leiomyomas and sarcomas as well as leiomyoblastomas; 2) cellular leiomyomas; 3) miscellaneous sarcomas which include spindle, pleomorphic, and primitive small cell types; 4) myenteric schwannomas; and 5) glomus tumors. The overall incidence of these tumors remains somewhat varied from institution to institution, though Appleman reports figures that show epithelioid leiomyomas are the most common at about 45%.² Of the other

types, epithelioid comprised 20%, cellular leiomyomas 20%, miscellaneous sarcomas 8%, and the rest composed of myenteric schwannomas and glomus tumors. These percentages, computed from a 10-year series of 49 cases, are comparable to other series. The overall incidence can best be reported as rare since 97% of gastric cancers are adenocarcinomas. Lymphomas compromise 60% of the remaining 3%.³

Clinically, these patients tend to be in their sixth to seventh decade of life. They may present with the same features of the more common adenocarcinomas, i.e., weariness, abdominal pain, melena, weight loss, hematemesis, and a palpable mass. Benign tumors, however, may remain asymptomatic for some time.

CT scan remains the best diagnostic noninvasive procedure. Adenocarcinoma and lymphoma exhibit regional and circumferential thickening of the gastric wall with perigastric lymphadenopathy common in both conditions. Gastric stromal tumors usually exhibit a more exogastric spread rather than the above-mentioned pattern.⁴

Grossly, stromal tumors appear intramurally with varying sizes from 1 cm. to over 20 cm. The mass may be singular, lobulated, or multinodular in appearance with a pseudocapsule. Ulcers, hemorrhagic necrosis, and extensive cystic changes may also be characteristic. However, while these features may differentiate this tumor from lymphoma and adenocarcinoma, they are still nonspecific in differentiating the specific stromal types.² Tumor sizes give some prediction of metastatic risk with tumor size greater than 10 cm. associated with a risk of 60%.² While tumor size does not predict survival, there may be some association of increased survival with tumor sizes of less than 10 cm.⁵

For definitive diagnosis of the types of gastric stromal tumors, pathological study is the mainstay. Immunohistochemical analysis, electron microscopy study and light microscopy prove the most enlightening. Even then, the distinguishing pathological features of the stromal types are not agreed upon.¹ Diagnostic morphological features of malignancy, which is of most concern clinically, seem to involve mitotic counts. (Figure 1) The higher the mitotic count, the more likely the tumor is to metastasize.



Figure 1
Bizarre mitotic figure in malignant gastric stromal tumor.

size; however, no specific cut-off point is agreed upon with the possible exception of that absent mitotic figures predict no metastasis.^{1, 2} Grading of tumors at this time is not standardized to give any indication of malignancy level.

Treatment for gastric stromal tumors is surgical.⁵ Harvesting of lymph nodes is debatable with evidence of metastasis usually appearing in the liver or peritoneal surfaces.² Lindsay, et al., report no lymph node metastasis in 50 gastric leiomyosarcoma cases suggesting that node harvesting is not mandatory.⁵ Total resection of all identifiable tumors is obviously necessary. No specific operative procedure for resection of known malignant gastric tumors seems to affect the survival rates with treatment success depending on removal of all overt tumor.² Overall survival rates of malignant gastric stromal tumors are not much better than for gastric adenocarcinomas. The five-year survival rate of curative resection cases in one series was 32%.⁵ Within the same series, the overall average interval for recurrence of the disease was 20 months. Adjuvant therapy, whether chemotherapy or radiotherapy, seems palliative at best. Thus, treatment goals should be directed to removal of all identifiable and resectable tumor with outcome depending on tumor size, pathological features, and evidence of metastasis at time of operation. Follow-up would logically point to abdominal CT scan, yet interval selection remains individualized.

In conclusion, while gastric stromal tumors represent a rare neoplasm, the term should be in the surgeon's differential when faced with evaluation of patients presenting with gastric tumors. Exogastric growth encountered either surgically or by CT scan ought to prompt decisive operative resection where feasible. Though long term survival seems poor at best, modality for obtaining the most optimistic

obtaining the most optimistic prognosis re-prognosis remains quick intervention. Post-op follow-up consists of CT scan of the abdomen with close scrutiny of the liver.

Summary

This is a case report of a gastric stromal tumor, a tumor type formerly classified as a leiomyoma or leiomyosarcoma because the tumors were thought to arise from smooth muscle. Patients with gastric stromal tumors have a similar clinical picture to those patients with gastric adenocarcinoma. Identification is based on CT scan initially, but the histological features are more conclusive. Treatment consists of surgical intervention for tumor resection. No specific modalities of operation show superior long-term prognosis for malignant gastric stromal tumors. Survival rates are at best poor with one study calculating a 32% five-year survival rate. Recurrence is common, poor even for those patients operated on with curative resection.

Bibliography

1. Mazur, Michael T and Clark, H Brent. "Gastric Stromal Tumors, Reappraisal of Histogenesis," *The American Journal of Surgical Pathology*, Vol 17, No 6, September 1983, pp 507-519.
2. Appleman, Henry D. "Stromal Tumors of the Esophagus, Stomach, and Duodenum," *Pathology of the Esophagus, Stomach, and Duodenum*. Ed. Henry Appleman, Churchill Livingstone, New York, Edinburgh, London, Melbourne, 1984, pp 195-243.
3. Morton, John M, Poulter, Colin A and Panoya, Kishan J, "Alimentary Tract Cancer" *Clinical Oncology, A Multidisciplinary Approach*, 6th Edition, Ed. Philip Rubin, M.D., American Cancer Society, USA, 1983, Chapter 14, pp 154-178.
4. Scatarige, John C, Elliot R, Fishman, Bronwyn Jones, John L Cameran, Roger Sanders and Stanley S Siegilman. "Gastro Leiomyosarcoma: CT Observations," *Journal of Computer Assisted Tomography*. 9(2), March/April, 1985, pp 320-327.
5. Lindsay, Philip C, Welson Ordenez, and John H Raaf. "Gastric Leiomyosarcoma: Clinical Pathological Review of Fifty Patients," *Journal of Surgical Oncology*, Vol 18, 1981, pp 355-421.

Milestones in the First Century of Medicine in Nebraska

THE documented history of medicine and surgery in Nebraska dates back to September 26, 1819. It was on that day that Dr. John Gale, a military surgeon with the Sixth Infantry Division of the New Hampshire Rifle Regiment, arrived at Camp Missouri which was later named Fort Atkinson. This was the first time a steamboat had navigated this far north on the Missouri River. Fort Atkinson, located just east of present day Fort Calhoun, represented the first permanent white settlement in Nebraska. Dr. Gale clearly documented many of the events occurring at the fort during his stay. The most vivid accounts are those pertaining to the outbreak of scurvy, which decimated the troops during the winter of 1819-20. While stationed at Fort Atkinson, Dr. Gale married Ni-Ku-Mi, an Iowa Indian whom he later left. Their granddaughter, Susan La Flesche Picotte, became the first Indian woman physician in America and established the first hospital in Walthill, Nebraska. In 1832 Dr. Gale died of cholera while serving in the Blackhawk Wars in Illinois.

The first physician to actually settle in Nebraska was George L. Miller. He began his practice in Omaha in 1854 and was thought of as the "Father of Omaha" because of his efforts to improve and build the town. He fought to keep the capitol in Omaha, convinced the Union Pacific Railroad to build their route to the west through Omaha, began the **Omaha Herald**, and was its editor for 27 years. He helped establish the first medical organization in the territory (the Nebraska Medical Society) and helped organize the Nebraska Historical Society.

In 1867 Nebraska became a state. One year later, on June 24, 1868, the Nebraska State Medical Society was organized. The 23 physicians who attended that meeting elected Dr. Gilbert Monell as the first president. Dr. G. H. Peabody was chosen to be Nebraska's first official representative to the national A.M.A. meeting, which, in 1870, was held in Washington, D.C.

MARTIN L. ROTHBERG, M.D.

GREGORY V. STANISLAV, M.D.*

Department of Surgery, Creighton University School of Medicine, Omaha, Nebraska

In 1868 the first hospital was built in Omaha by Dr. Samuel D. Mercer. The building burned down shortly after construction, and several small hospitals sprang into existence over the next 20 years. The Omaha Medical and Surgical Institute was perhaps the first large and well-equipped hospital in Omaha. It was hailed as the finest hospital west of Chicago when it opened in 1891. It had 150 rooms and a staff of six physicians. By the mid 1920's, Nebraska had 69 hospitals, 44 of which had more than 25 beds.

With the rapid growth of Omaha as a railroad center in the late 1800's, the medical profession flourished. It was at this time that the dream of many of the early physicians to establish a school of medicine became a reality. The Nebraska School of Medicine and Surgery was established in 1880 and incorporated as the Omaha Medical College in 1881. There were 13 students in the first class, including two women. The school struggled for the first five years but became stronger as the population of Omaha grew.

By 1883, the University of Nebraska Medical College was established in Lincoln as a competitor to the Omaha Medical College. The school received state support which lowered tuition and attracted many students from the Omaha Medical College. However, due to infighting between faculty members and the lack of a hospital for clinical use, the University of Nebraska Medical College closed in 1887.

*Send Correspondence To: Gregory V. Stanislav, M.D., Department of Surgery, 601 North 30th Street, Omaha, NE 68131.

The Omaha Medical College attempted to rid itself of the stigma of being a proprietary school by affiliating first with the Methodist Episcopal College of York in 1885, and later with Bellevue College in 1891. A lasting affiliation occurred in 1902 when the Omaha Medical College and the University of Nebraska reached an agreement whereby the University of Nebraska College of Medicine was created. A four year curriculum was outlined with classes taken in Lincoln the first two years and in Omaha the remaining two. Through the efforts of a few physicians, the State Legislature was convinced to appropriate money to construct a new building at 42nd & Dewey. It became the permanent site of the School of Medicine in 1913 and still stands as the South Laboratory Building.

The John A. Creighton Medical College was established in 1892 through the generosity of the Honorable John A. Creighton. He donated the funds to build the first permanent home for the school, at 14th and Davenport, which opened in 1898. From the start, the John A. Creighton Medical College was closely affiliated with St. Joseph Hospital, which was also largely supported by the Creighton family. The first dean of the Creighton Medical School, DeWitt C. Bryant, was one of the original organizers of the American College of Surgeons.

There were many outstanding physicians in the state during this period. Dr. George Shidler of York was one of the first surgeons west of the Mississippi and a pioneer in the use of local anesthesia. He performed the first appendectomy in York County. Dr. William Milroy was the first to describe a variety of hereditary edema in 1892. He was immortalized by Sir William Osler, who later named the disease after him. Dr. Victor Coffman, a pioneer surgeon and faculty member of the Omaha Medical College, is credited with performing the first ovariectomy in Nebraska and the first successful resection of a thyroid tumor in the world. Because the patient had no money, Dr. Coffman cared for her at his home, without charge, during her recovery.

In 1896 Dr. Harold Gifford, an ophthalmologist, described acute conjunctivitis caused by pneumococcus, commonly known as "pink eye". In 1915 E. Willard Powell, an Omaha surgeon, developed a prosthetic tracheostomy tube for use following tracheal resections for malignant disease. He was also instrumental in the development of surgery for varicose veins and open drainage of pleural empyema. Finally, Dr. Edwin Davis, an Omaha urologist, helped develop the use of mercurochrome as a local and urinary antiseptic.

At the close of the first century of medicine in Nebraska, the state society had been in existence for some 50 years and had established the Nebraska State Medical Journal. The state's two medical schools were well established and had a combined enrollment of approximately 400 students. Between the two university hospitals, about 12,000 patients were being seen each year. The surgical specialties remained strong, as evidenced by some 5,300 procedures performed per year. Furthermore, as of 1924 the Nebraska section of the American College of Surgeons became the first formal state organization in the country to join the college.

Many other Nebraska physicians from all disciplines of medicine have left their mark on the history of medicine and the state during the period 1819-1919. Their pioneering spirit and dedication created the mold from which many more outstanding physicians were to be formed.

Bibliography

1. Orr, H Winnet, **Selected Pages From the History of Medicine in Nebraska**. Lincoln, Nebraska, 1952.
2. **The First Hundred Years of the University of Nebraska College of Medicine**, University of Nebraska Medical Center, Omaha, Nebraska, 1980.
3. Tyler, Albert F, (ed). **History of Medicine in Nebraska**, Magic City Printing Co., Omaha, Nebraska, 1928.

Acknowledgements

We gratefully acknowledge the assistance of the Douglas County Historical Society, Steve Kemper of the Nebraska Game and Parks Commission, Mrs. I. Giandinoto and Mrs. S. Cherney in preparing this paper.

FRACTURE OF THE MONTH

Growth Arrest Following a Minimally Displaced Distal Femoral Epiphyseal Fracture

DISTAL femoral epiphyseal fractures are the most treacherous and complication-prone growth plate injuries, despite their sometimes innocuous appearance on initial radiographs. This case is presented to illustrate the high risk of growth arrest and deformity possible after even minimally displaced fractures treated appropriately at the time of injury.

Case Report:

A 13-year-old boy was brought to the emergency room after sustaining a valgus blow to the right knee while playing football. He was immediately unable to bear weight and complained of pain predominantly on the lateral aspect of his knee. His right knee was swollen and tender along the lateral distal femur. There was 3+ instability on valgus stress with the knee flexed, as well as in full extension. Anterior drawer and Lachman tests were poorly tolerated but confirmed medial instability. Ligamentous disruption was suspected. However, x-rays demonstrated a Salter II fracture of the distal femoral epiphysis with minimal displacement (Figure 1). The child was admitted to the hospital and underwent a gentle closed reduction of the fracture. He was then placed in a long leg cast for six weeks with apparent uneventful healing.

Two years following his fracture, the patient presented to a second orthopaedist with complaints of limp and aching in the right knee during vigorous activity. A 3 cm. leg discrepancy was evident clinically and by x-ray measurement. There was a mild scoliotic deformity which could be corrected by elevating the short limb. Except for the shortening, no other abnormality was apparent on the symptomatic side. Radiographs revealed a complete closure of the distal femoral growth plate (Figure 2). The proximal tibial growth plate was still open.

J. F. CONNOLLY, M.D.

R. SHINDELL

W.W. HUURMAN, M.D.

From the combined programs in Orthopaedic Surgery, University of Nebraska Medical Center, Creighton University, Omaha, Veterans Administration Hospital, 42nd and Dewey Avenue, Omaha, NE 68105-1065



Figure 1

X-ray at the time of initial injury shows a barely visible minimally displaced fracture of the distal femoral epiphysis in a 13 year old boy. Ordinarily, because of his age, little subsequent growth effect would be expected. However, this boy had a widely open epiphyseal growth plate and subsequently went through his adolescent growth spurt after the fracture.



Figure 2

X-rays when the patient presented two years after the fracture show closure of the distal femoral growth plate with the proximal tibial growth plate still open. Clinically and radiographically the patient had developed 3 cm. of shortening.

Discussion:

Fractures of the epiphyses are generally separated into five Salter-Harris types depending on whether or not the injury has violated the growth apparatus.¹ If the fracture line runs from the metaphyseal region across the cartilaginous growth plate into the epiphyseal bone, the chances for early arrest of the plate with shortening and/or angulation of the limb are quite high. Fortunately most epiphyseal fractures, particularly in the upper limb, cause no or minimal growth effect, since they usually involve the metaphyseal region rather than the growth plate or epiphysis.² In the lower limb, especially about the knee, the opposite is true. In the juvenile group from about two to twelve years of age, the reported frequency of significant growth arrest after distal femoral epiphyseal fractures may be as high as 80%.³ In anatomic dissections we have found that the distal femoral growth plate consists of peg-like projections rather than the straight line it appears to be on standard x-rays.⁴ These

undulating projections would cause fractures in the area to cross readily from the metaphysis through the cartilage plate into the bone of the epiphysis. The consequence would be a high susceptibility to growth arrest in this region, after even minimally displaced fracture, such as the present one.

Management of these fractures requires as anatomic reduction as possible by closed or open technique. External fixation may also be useful to stabilize shear fractures which tend to redisplace in a cast. In addition, recent animal studies in our lab indicate that non-steroidal anti-inflammatory drugs, such as Tolmetin, may be useful to prevent callus bridging for 3 to 4 weeks, long enough for the cartilage growth plate cells to recover and fill in the area of the fracture defect.⁵

Because of the anatomic susceptibility and high frequency of growth arrest subsequent to distal femoral fractures, the physician should anticipate problems and advise parents that the child requires follow up until skeletal maturity. In most instances shortening or angulation becomes evident within 18 months, but some have taken as long as 4 years to develop. Options for treating post-traumatic leg length discrepancy include: 1) accepting the deformity, if slight, and treating with a shoe lift, 2) lengthening the short limb, and 3) shortening the long limb. An additional method available when partial arrest and progressive angular deformity exist is to resect the bone bridge from the arrested portion of the growth plate and interpose fat graft or inert material to prevent recurrence. For this child the degree of shortening did not warrant a lengthening procedure. Similarly the minimal growth remaining at his age of 15 years did not allow elective epiphysiodesis to shorten the long limb. However, this would have been the treatment of choice had the deformity been evident earlier. The recommended management was a closed shortening osteotomy of the long femur to be performed at the end of skeletal growth.

Summary

Although most epiphyseal fractures heal without complications, those about the knee carry a high risk of subsequent growth impairment. The potential for deformity after epiphyseal fractures must be recognized early

and the fracture managed expectantly. This present case illustrates that management, particularly of the distal femoral fracture, cannot end with removal of the cast. It must include close observation to detect shortening and angulation as long as a child has not reached skeletal maturity.

References

1. Connolly JF: 3rd Edition DePalma's **Management of Fractures and Dislocations**, pp 219-233, Philadelphia, Saunders, 1981.
2. Connolly JF and Smith SM: Displacement of an unstable radial epiphyseal fracture in plaster, *Neb Med J*, 68:210, 1983.
3. Riseborough EJ, Barrett IR and Shapiro F: Growth disturbances following distal femoral physeal fracture-separations, *J Bone and Joint Surg*, 65-A:885, 1983.
4. Lippiello L, Bass R and Connolly JF: Age-dependent changes in growth plate conformation, 33rd Annual Meeting, ORS, San Francisco, CA, 1987.
5. Shindell R, Lippiello L and Connolly JF: Acquired growth deformity following transphyseal fracture: prophylactic administration of Indomethacin, 33rd Annual Meeting, ORS, San Francisco, CA, 1987.

Clinical Case Conference, UNMC

CASE 11 — 1986 Presentation of Case

CC: Progressive swelling and pain in the neck.

HPI: The patient is a 51-year-old white female who originally presented to a hospital in Iowa in 6/86 with a 3-day history of dull substernal chest pain with radiation into both shoulders and into the neck. The pain was worse supine and better sitting upright. She also reported a history of increased fatigue and mild dyspnea on exertion but denied nausea, vomiting, or diaphoresis. Prior to entering the hospital, she had been self-administering Ibuprofen and Tylenol with some relief of the discomfort.

Physical exam on admission revealed a middle-aged female with moderate distress. Her vital signs included a temperature of 100°, pulse 80, respiration 20, blood pressure 102/76, and a palpable paradoxus (no # given). Cardiovascular exam revealed moderate jugular venous distension with muffled heart sounds. Lung fields were clear. An echocardiogram was performed and showed large anterior and posterior pericardial effusions. She was placed initially on Indocin. This was changed to Prednisone because of increased pain and shortness of breath. Eventually she underwent a therapeutic and diagnostic pericardiocentesis with biopsy, and drainage of 300cc of bloody fluid with prompt relief of symptoms. The fluid showed 4200 WBC/mn, 38,000 RBC, no growth on culture, and negative cytology. The pericardial biopsy showed a haemorrhagic pericarditis with marked mesothelial hyperplasia. Prednisone was continued and she did well until one day prior to planned discharge, when she developed a "tight feeling" in her right arm with subsequent fluid accumulation and cyanosis. She underwent a right upper extremity venogram which confirmed a right subclavian vein thrombosis with extension into the jugular system. Because of her need for anticoagulation and the presence of haemorrhagic pericarditis, she was taken to the OR where a pericardial window was created and she was subsequently anticoagulated.

GERALD MOORE, M.D. EDITOR

Assistant Professor, Division of Rheumatology/
Immunology, Department of Internal Medicine,
University of Nebraska Medical Center, Omaha,
Nebraska

T. SCOT ROBERTSON, M.D., ASSOCIATE EDITOR

Associate Chief Medical Resident, Department of
Internal Medicine, Bishop Clarkson Memorial Hospital,
Omaha, Nebraska

HOWARD P. MONSOUR, M.D., ASSOCIATE EDITOR

Chief Medical Resident, Department of Internal
Medicine, University of Nebraska Medical Center,
Omaha, Nebraska

Pertinent lab and diagnostic tests during the hospitalization included a CBC with WBC 9.9×10^3 and 84S/11L/2B/3M; Hb/Hct was 13.1/40% and Plts of 450,000; PT/PTT, thyroid profile, electrolytes with BUN, and creatinine were normal. LFT's included an SGOT 33(7-23), Alk-phos 99(24-82), and T bili 0.6(0-1.5). Arterial blood gases were pH7.46, pCO₂29, & pO₂ 55 on room air. VDRL was nonreactive; FANA was positive at 1:1280 (lightly speckled); C₃ complement 143(80-180), C₄ complement 41(15-45), complement factor B 50(17-42), CEA 1.7(3N), CA-125 400 (N35). A 12-lead EKG showed sinus tachycardia with nonspecific-ST-T wave changes. A chest x-ray demonstrated an increased cardiac silhouette, and a CT scan of the thorax showed a large pericardial effusion without lung parenchymal or pleural disease. The patient was discharged on a rapid tapering course of Prednisone and maintenance Coumadin.

The patient presented again in the same hospital on 9/9/86 with a 1-½ week history of nonproductive cough, fatigue, dyspnea on exertion after three steps and recurrence of her chest pain. At this time her steroids had been discontinued for more than a month;

*Send reprint requests to: Howard Monsour, M.D., Chief Medical Resident, University of Nebraska Medical Center, Department of Internal Medicine, 42nd & Dewey Avenue, Omaha, Nebraska 68105.

however, she was still taking Coumadin as ordered. Physical exam revealed induration at the base of the right neck attributed to the previous thrombotic event, palpable anterior cervical and left supraclavicular nodes, and questionable palpable bilateral axillary nodes. Lungs were reported to be clear, and cardiovascular exam was unremarkable. Pertinent laboratory and diagnostic tests included TSP with normal pattern, ESR 30, monospot negative, arterial blood gases on room air of 7.44/31/79; FANA with a titer of 1:1280 (lightly speckled), and nDNA negative. The chest x-ray revealed bilateral pleural effusions, diffuse interstitial edema and the heart silhouette was at the upper limits of normal. A repeat echocardiogram failed to demonstrate a pericardial effusion. CT scan of the thorax and upper abdomen revealed bilateral pleural effusions, mild thickening of the pericardium and one 8mm periaortic node. CT scan of the neck revealed no cervical lymphadenopathy, and a 15mm node at proximal left main bronchus. A ventilation perfusion lung scan was done and was normal. She eventually underwent a diagnostic thoracentesis of 175cc yellow fluid, which showed a transudate with cytology showing marked mesothelial hyperplasia, glucose 46 (serum 118), and bacterial and fungal cultures were negative. She was subsequently discharged on Coumadin, 40mg Prednisone, and 40mg Lasix per day when her symptoms stabilized.

The patient was again admitted 10 days later with a nonproductive cough, chest tightness, a "strangling sensation" in the neck for the previous five days with associated dyspnea on exertion, orthopnea and paroxysmal nocturnal dyspnea. She had been running low grade fevers to 99.8° for several days prior to admission. Physical exam revealed marked jugular venous distention with associated left arm and bilateral neck swelling; lungs revealed bibasilar rales, and cardiac exam revealed a normal S₁ & S₂ without any extra heart sounds. Arterial blood gases on room air were 7.55/29/78, and the chest x-ray revealed increased alveolar infiltrate with bilateral pleural effusions. The patient was transferred here for further evaluation.

Her past medical history revealed no history of medical allergies. The patient's operations included the removal of a lipoma from her neck

in 1985. The patient had four previous hospitalizations for uncomplicated vaginal deliveries. On admission her medications included Micro K, Prednisone 10 mg QID, Furosemide 40 mg q day, and Coumadin 5 mg alternating with 10 mg each day. Her social history revealed no history of smoking or drinking. The patient was the wife of a pastor. The family history showed that the patient was adopted and was not aware of any family history of any diseases but did have a daughter with ulcerative colitis.

Laboratory and diagnostic scans obtained at this hospital included a CBC with differential revealing a white blood cell count of 10.8×10^3 with 69 segs, 7 bands, 20 lymphs, and 4 monocytes. Her hemoglobin and hematocrit were 15.4 and 41.8 percent, respectively. A sedimentation rate was found to be 54 mm/Hr. Her FANA was positive with a titer of 1:640 with a speckled pattern. An anti-native DNA antibody was negative. Complement studies revealed a C₃ of 142 (normal 76-157) and a C₄ of 32.5 (normal 13-35). Circulating immune complexes were obtained with an IgG of 10 (N=0-30) and an IgM of 151 (N=101-150). Quantitative immunoglobulins revealed an IgG of 230 (N=46-278), an IgA of 130 (N=73-438) and an IgM of 760 (N=670-1453). In evaluation of possible recurrent thrombotic episodes, she had an antithrombin III level obtained with a functional level of 142 (N=85-125) and an immunologic level of 15.2 (N=8.4-14.3). A plasminogen level was 101 (normal 73-122). Protein C and Protein S levels were 5 and 34 respectively, both of which were within normal ranges. A urinalysis showed 1+ bacteria without any evidence of red blood cells or white blood cells. An echocardiogram revealed pericardial thickening but no pericardial effusion. The lupus anticoagulant test was negative.

Hospital Course

The patient was transferred to our hospital with a presumed recurrent venous thrombotic event of her jugular and subclavian veins with associated congestive heart failure. The physical exam confirmed marked distention of the veins in the neck and left arm. An emergent superior veno-cava gram was done which confirmed major thrombus involving the basilic, brachial, cephalic, axillary, subclavian, and interior jugular veins on the left with multiple

collaterals. The patient's Coumadin was stopped and a heparin infusion begun, and her oral steroids were changed to an IV form. Because of the profuse pulmonary edema, IV furosemide was started. Over the next week the edema in her neck and arm improved and her symptoms decreased.

Because of a persistent abnormal interstitial pattern on the chest x-ray, the pulmonary service was consulted. Pulmonary function tests (PFT's) were obtained and revealed FVC 2.14L (62% predicted), FEV₁ 1.607 (69% predicted), and single breath diffusion capacity 18.24 (82% predicted). Her arterial blood gases at that time were 7.55/25/79 on room air. The patient subsequently underwent a bronchoalveolar lavage and biopsy. The lavage fluid showed WBC 0.5K/ul with 90% macrophages, 6% PMN's, 3% lymphs, 1% mast cells, and transbronchial biopsy was read out as Disquantitative Interstitial Pneumonitis (DIP). Despite the initial favorable response to IV heparin, steroids and furosemide, the patient's pulmonary status subsequently deteriorated and she developed progressive dyspnea. A repeat single breath diffusion capacity (DSB) 12 days after the original PFT's showed deterioration in her diffusion capacity to 41% of predicted. A diagnostic procedure was performed.

Differential Diagnosis

Dr. Cary Peterson: Did she still have adenopathy when she was transferred?

Dr. Scot Robertson: She never had any documentation of adenopathy. The CT of the neck did not confirm any. There may have been venous distention or venous thrombosis.

Dr. Gerald Moore*: This is a 51-year-old white female who presented with an acute, three-day history consistent with constrictive pericarditis. She also had a history of chronic cough and dyspnea on exertion which continued throughout the prolonged course. There was a history of recurrent thrombosis of the upper extremities without involvement of the lower extremities. She had a positive antinuclear antibody with normal serum complement and anti-native DNA antibodies. She had bilateral pleural effusions and pericardial fluid which were negative for any bacterial or tuberculous organisms. Additionally, she had some type of pulmonary interstitial infiltrate

which ultimately led to her decline and the diagnostic procedure that was performed. I will discuss the differential diagnosis of some of the above in an effort to demonstrate a reasonable approach to this patient's problems.

The differential of cardiac tamponade mimics the differential of pericarditis. Any of the entities may result in cardiac tamponade when fluid accumulates without relief. The major causes can be separated into inflammatory, malignant, congenital, and unknown etiologies as shown in Table 1. By far the most common are the inflammatory types manifested by acute or chronic pericarditis. Infectious etiologies should be high on the list of suspected causes of pericarditis, but in view of her negative cultures, I would eliminate that as a significant likelihood. I would also eliminate any primary cardiac disorder, such as myocardial infarction, in view of the negative history. Post-pericardiotomy syndrome is a cause of an inflammatory pericarditis, but she did not have any operative chest procedure prior to the onset of her initial problem. There was no history of trauma. Connective tissue diseases will be discussed later. There was no history of allergic disorders that would possibly explain her problems. The only medications that she was taking at the onset were Tylenol and Advil, which do not generally result in pericarditis. Metabolic derangements or physical agents such as environmental toxins do not appear to be etiologic agents.

TABLE 1
PERICARDITIS

- I. Inflammatory
 - Acute and chronic pericarditis
 - benign
 - infectious
 - myocardial infarction
 - post-pericardiotomy
 - trauma
 - connective tissue disease
 - allergic
 - metabolic
 - physical agents
- II. Malignant - Bloody
 - lung
 - breast
 - intrathoracic metastasis
- III. Congenital
- IV. Unknown

A malignant pericardial effusion is many times characterized by a bloody effusion, as was present in this case. Most commonly mentioned sources are lung, breast, and any intrathoracic metastasis.

Although any of the causes of pericarditis may have bloody pericardial effusions, particularly those associated with operative intervention, trauma, or myocardial infarction, I find nothing to support any of these latter diagnoses. Many of the infectious diseases also may have bloody effusions. Congenital abnormalities can be eliminated. For completeness, unknown etiologies should be listed.

The next problem that developed during her initial hospitalization was a single upper extremity venous thrombosis followed by massive thrombosis of multiple veins of her upper extremities. The most common causes of thrombosis in the upper extremities are related to trauma (Table II), such as an individual with an intravenous line or a Swan-Ganz catheter. I am going to eliminate these by history and go to spontaneous causes of thrombosis of the upper extremities. Many of the listed etiologies can cause thrombosis of the lower extremities as well, so it may be somewhat difficult to separate out those responsible for upper extremity thrombosis alone. Congestive heart failure, particularly because of decreased blood flow, can lead to a diffuse thrombotic process. Malignancy, primarily lung or non-Hodgkin's lymphoma, can lead to superior vena cava syndrome. There was no CT evidence for mass lesions near the superior vena cava. Hematological abnormalities such as polycythemia or significant thrombocytosis were not present in this case. Antithrombin III deficiency should be considered in anyone who has recurrent thrombotic events. However, there would be no reason for these to be limited to the upper extremity. Functional tests for Antithrombin III, Factor C, and Factor S were normal, which would eliminate factor deficiency as a likely possibility. She was not a quadruplegic.

Another of the causes of recurrent thrombotic events is the lupus anticoagulant. The lupus anticoagulant, in spite of its name, is not associated with an increase in bleeding but rather with an increased risk of recurrent thrombosis. These thrombotic events can occur anywhere in the body with the central

TABLE II

THROMBOSIS UPPER EXTREMITY

- I. Trauma
 - II. Spontaneous
 - CHF
 - Malignancy - lung, non-Hodgkin's lymphoma
 - Polycythemia
 - Thrombocytosis
 - Antithrombin III deficiency
 - Quadriplegia
 - Lupus anticoagulant (?)
 - Idiopathic
- Migratory Thrombophlebitis - Trousseau's
- Pancreatic CA - 24%
 - Lung CA - 19.8%
 - Prostate - 12.6%
 - Stomach - 11.6%
 - Other

nervous system being fairly common.¹ Although the lupus anticoagulant is present in a minority of patients with systemic lupus erythematosus, it also may be found rarely in other systemic diseases. Screening for the lupus anticoagulant will identify individuals with a mildly elevated thromboplastin time and a distinctly prolonged PTT. The PTT is not corrected by addition of normal plasma. In patients with systemic lupus about 25% show the lupus anticoagulant associated with a false positive VDRL. In this patient, the PTT was normal and the test for lupus anticoagulant was negative.

Migratory thrombophlebitis (Trousseau's sign) is classically associated with carcinoma (Table II). Twenty-four percent of pancreatic carcinomas, and lesser percentages of individuals with lung, prostate, stomach, and other carcinomas will manifest a migratory phlebitis. This patient's findings do not fit the classic description of Trousseau's sign, especially as there were only two episodes of large vessel thrombosis without superficial phlebitis.

Another significant problem identified in this case is the positive antinuclear antibody, and the diagnosis of systemic lupus or other connective tissue diseases must be considered. The major causes of a positive antinuclear antibody are listed in Table III. Five percent of the population may demonstrate a positive antinuclear antibody at some point in time. Thirty-eight percent of patients who are older than 60 years may have a significant titer. The definition of a significant titer depends on the

TABLE III
POSITIVE ANA

- A. Normal - 5% population
38% patients >60 years - significant titers
- B. Abnormal
 - 1) Autoimmune disease
 - Systemic Lupus Erythematosus - 95-99%
 - Mixed Connective Tissue Disease - 95%
 - Progressive Systemic Sclerosis - 55%
 - Rheumatoid Arthritis - 52%
 - Dermato/Polymyositis - 40%
 - Polyarteritis Nodosa - 33%
 - 2) Chronic inflammatory disease
 - e.g., EB virus

laboratory and test procedure involved. A titer of 1:1280, such as this patient had, is generally significant. However, as she was younger than 60 years, other possible explanations for a positive ANA must be considered. Most of the other causes of a positive antinuclear antibody are autoimmune disorders. Ninety-five to 99% of individuals with systemic lupus erythematosus (SLE) may have a positive antinuclear antibody. Incidentally, those individuals with the lupus anticoagulant and SLE many times are ANA negative. Other connective tissue diseases such as mixed connective tissue disease, scleroderma, rheumatoid arthritis, polymyositis, and polyarteritis may have varying degrees of positivity for the antinuclear antibody. Chronic inflammatory diseases, such as associated with Epstein-Barr virus, should also be considered.

This individual had an ANA pattern which was described as finely speckled or lightly speckled fluorescence. The pattern of fluorescence depends upon which nuclear antibodies are present in the patient's serum. The pattern of fluorescence frequently is not helpful, yet it may lead to consideration of one specific connective tissue disease more than another. With a speckled antinuclear antibody, the key diseases that should be considered are mixed connective tissue disease (MCTD) and scleroderma (PSS). Both of these disorders manifest fibrotic skin thickening and may have pulmonary and cardiac involvement. The overall clinical picture in this case does not fit well with either disease process.

Any patient who demonstrates multiple

system involvement should be evaluated for systemic lupus erythematosus. That was a consideration in this case. This patient demonstrated pleuritis and pericarditis, had a positive ANA, and had increased thrombotic activity. Her physicians were concerned about the possibility of SLE as an etiological explanation for her problem. However, I would find it very unusual for an individual to have the degree of pericardial and pleural disease she demonstrated without some of the other major manifestations of SLE. The 1982 revised criteria for the classification of patients with systemic lupus lists 11 different manifestations of disease activity (Table IV).² The first four — malar rash, discoid rash, photosensitivity, and oral ulcers — are all mucocutaneous manifestations. This individual had none of these manifestations. Arthritis is one of the most common findings in patients with SLE. Over 90% of individuals have some evidence of joint complaints. There is not any evidence for arthritis in this woman, which would lead one away from the diagnosis of SLE. Another major criterion is serositis, such as demonstrated in the patient's pleuritis and pericarditis. No evidence of renal insufficiency or a neurological disorder was found. She had some mild hematologic abnormalities but demonstrated no evidence of hemolytic anemia or leukopenia. In SLE, immunologic testing may show multiple abnormalities. Decreased serum complement levels (low C3 and C4 levels) may be present. Anti-DNA antibodies may be elevated, particularly in those with SLE renal disease. In this patient, these serologic tests were normal or negative.

TABLE IV
THE 1982 REVISED CRITERIA FOR
CLASSIFICATION OF SYSTEMIC
LUPUS ERYTHEMATOSUS

1. Malar rash
2. Discoid rash
3. Photosensitivity
4. Oral ulcers
5. Arthritis
6. Serositis
7. Renal disorder
8. Neurologic disorder
9. Hematologic disorder
10. Immunologic disorder
11. Antinuclear antibody

In order to classify individuals as having SLE, four or more of the 11 criteria must be present. This patient demonstrated only two of the criteria (serositis and positive ANA), and therefore was not likely to have SLE. It should be noted that this is a classification scheme and, therefore, certain patients with fewer than four criteria may have SLE, while others may not have SLE when more than four of the criteria (serositis and positive ANA), and history, I think it is very unlikely that she had systemic lupus erythematosus or any other connective tissue disease.

Dr. Steve Smith, would you now review the x-rays?

Dr. Steve Smith: The x-ray pattern (Figure 1) that this patient presented was that of a diffused interstitial pattern as well as probably a bilateral pleural effusion. The main pulmonary artery appeared to be slightly enlarged, but that was difficult to evaluate. When one looks at an x-ray like this, multiple things should come to mind in your differential. Without particular reference to this case, I am going to list and discuss these.

Congestive heart failure can present in this fashion as the fluid initially begins to accumulate in the lymphatics. That was one of the concerns when she initially presented and an attempt at diuresis with repeat x-ray would be a reasonable way to include or exclude that diagnosis.

Occupational disorders should be included in the differential, and some of these occupations to elicit during the history taking would be farming, mining, or exposure to birds. Drug-induced lung disease is another major category. Chemotherapeutic agents are the ones that we see most frequently in today's world. Macrodantin lung, however, is still occasionally seen. Any time you see an x-ray like this, you have to include sarcoid in the differential diagnosis. The patient did not appear to have much in the way of adenopathy, but sarcoid can present with interstitial infiltrates as its only pulmonary manifestation. The pulmonary fibrotic processes, including idiopathic pulmonary fibrosis and that associated with autoimmune disorders, should be included in this patient's differential. Since her ANA was

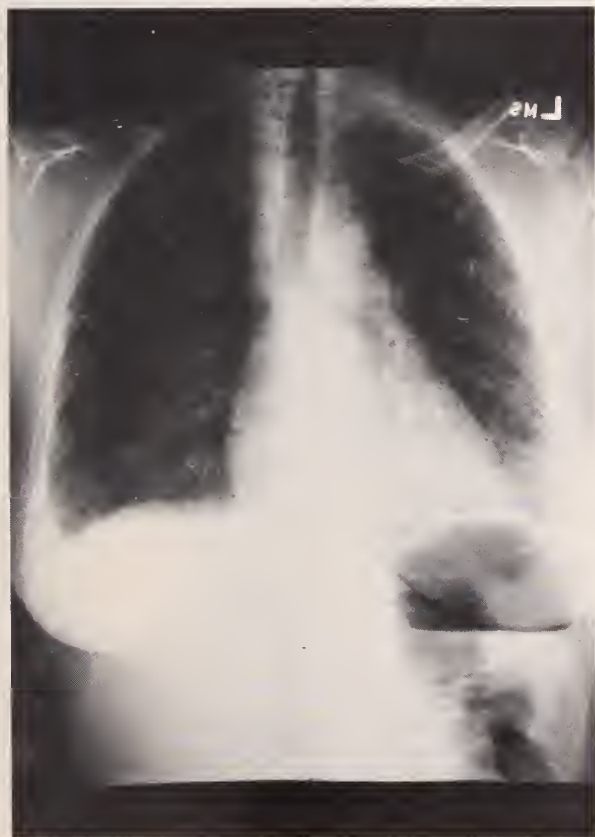


FIGURE 1

elevated, that would be an attractive diagnosis as well.

Another category is infectious processes. This patient had been on steroids intermittently for several months and certainly a pneumocystis pneumonia or a granulomatous process should be considered. The final category would be malignancies. Lymphangitic carcinomatosis can also present in this fashion, and the things that you would want to include as potential primary sources include breast, ovary, or pancreatic lesions in a female.

Dr. Moore: I do not feel I can make a specific diagnosis on the basis of the chest x-rays and lung findings, so I will discuss the other abnormal antibody that this patient demonstrated.

CA 125 is a monoclonal antibody that was first identified and reported in 1981 by Dr. Bast in New York.³ He found it to be a tumor marker for ovarian carcinoma. Eighty percent of non-surface epithelial ovarian carcinomas demonstrate this antibody. In normal individuals less than 35 units/ml is considered normal. Dr. Bast and colleagues studied 1,000 women (eliminating all women who were pregnant) and found that only 1% had values greater than 65 units/ml. In another study, 888 normal blood donors were evaluated.⁴ Only 0.2% were found to have levels greater than 65 units/ml. This patient had a level of 400 units/ml putting her in the abnormal range. (Table V)

A level of greater than 220 units/ml virtually eliminates benign disease as the etiology for the elevation. Bast and colleagues state that the probability of cancer is 100% if the level is over 220 units/ml. With this patient's level being about twice that, carcinoma needs to be placed high on the differential list. With levels greater than 65 units/ml, slightly less than half of the individuals with pancreatic carcinoma will have a positive CA 125.⁵ About 25% of individuals with lung cancer will have a positive CA 125. Elevated levels are found in 10-15% of breast and colorectal cancers. For all individuals with levels over 220 units/ml, the probability of having non-surface epithelial ovarian carcinoma is 52%.

In summary, this individual had been well until several months before the diagnostic procedure was performed. She developed cardiac tamponade with obvious signs and

symptoms related to that. She had at least two episodes of recurrent thrombotic events of the upper extremity. She had a positive anti-nuclear antibody. Small pleural effusions with an increasing alveolar infiltration or interstitial lung disease were also present. In addition, she had a positive CA 125.

With the information that is available, I believe that a malignancy was the most likely finding. Bronchiolo-alveolar carcinoma is a possible etiology because it is found in non-smokers and it is very commonly associated with rapidly increasing shortness of breath, both of which fit this patient. It is often associated with significant sputum production which was not present in this individual. Bronchiolo-alveolar carcinoma may occasionally cause an interstitial pattern like that seen in this patient. A carcinoma would also explain her pericardial effusion and could cause a superior vena cava syndrome and recurrent thrombosis of the upper extremities.

Other carcinomas that need to be considered are the non-surface epithelial ovarian carcinoma mentioned earlier because of its frequent association with the high level of CA 125. However, it would be very unusual for an ovarian carcinoma to present with pulmonary and cardiac manifestations without any significant abdominal problems. Carcinoma of the breast and pancreas should be listed because of their frequency in this age group. To be complete, thyroid, renal, and other tumors should be included since they may result in a fine micronodular pattern in the lungs.

Dr. Monsour: Are there any questions?

CA-125 **TABLE V**

Associated with ovarian cancer
(reported 1981 - Bast)

Found in 80% non-mucinous epithelial ovarian CA
Normal <35 u/ml

1000 women — 1% >65 u/ml
888 blood donors — 0.2% >65 u/ml

>220 u/ml

Eliminates benign disease

Probability of cancer - 100%

— pancreatic
— lung
— breast
— colorectal

Probability of ovarian CA - 52%

Dr. Margaret Tempero: I would just like to say that typically broncho-alveolar cell carcinomas present with an alveolar pattern, whereas the pattern in this patient is more interstitial. In fact, broncho-alveolar cell carcinoma is one of the few tumors that can present with an air bronchogram. I think this pattern is more typical of an interstitial infiltrate rather than a broncho-alveolar carcinoma.

Dr. Monsour: Dr. Robertson, do you know what the working diagnosis was at this time before the biopsy was made?

Dr. Robertson: This patient was hospitalized on three different occasions and was discharged with a diagnosis of collagen-vascular disease, type unknown. She was presented at Chest Conference at Clarkson Hospital, and at that time we did not have the results of her complement studies or coagulation studies. So we were still considering collagen vascular disease, but we were suspicious of a possible malignancy.

Dr. Monsour: A lung biopsy was obtained, and Dr. James Linder will review the pathologic findings.

Dr. James Linder: Both a transbronchial and an open lung biopsy were done. In the transbronchial biopsy, abnormal clusters of cells were present in the soft tissue adjacent to

the bronchial cartilage. These cells were cytologically malignant, with a high nuclear to cytoplasmic ratio, irregular nuclear chromatin and numerous mitotic figures. In both the transbronchial and the open lung biopsy, clusters of these cells occurred within small vascular structures. This was most apparent in the open lung biopsy, where subpleural lymphatics were distended by these abnormal cells (Figure 2). Such histology is typical of lymphatic spread of malignancies in the lung, and accounts for the interstitial pattern in the chest radiographs described by Dr. Smith. At this point there are two important questions. First, is this poorly differentiated malignancy a carcinoma, sarcoma, or lymphoma? And second, are these cells derived from a primary malignancy of the lung or are they metastatic from another organ?

Immunohistochemical stains were performed to help identify the nature of the neoplasm. Figure 3 illustrates the tumor cells marking with an antibody to cytokeratin. The tumor cells did not mark with anti-leukocyte common, an antibody which recognizes the cells of malignant lymphoma. The presence of keratin in the tumor cells indicates that this is a carcinoma, and not lymphoma or sarcoma.⁶ Further supporting the diagnosis of an epithelial malignancy was an electron microscopic study done by Dr. Marc Hapke at Bishop

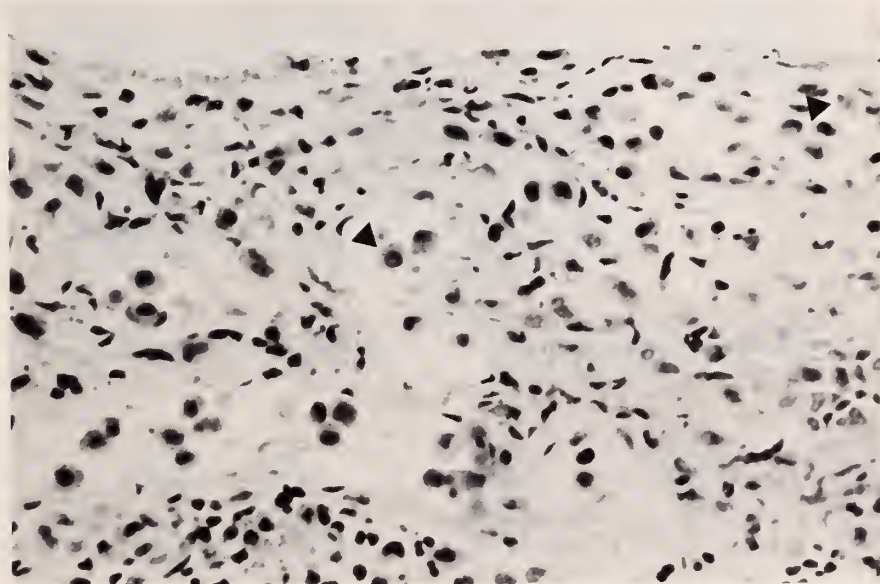


FIGURE 2
SUBPLEURAL LYMPATHICS WERE DISTENDED BY TUMOR CELLS
(ARROW) — (H & E, original magnification x 200)

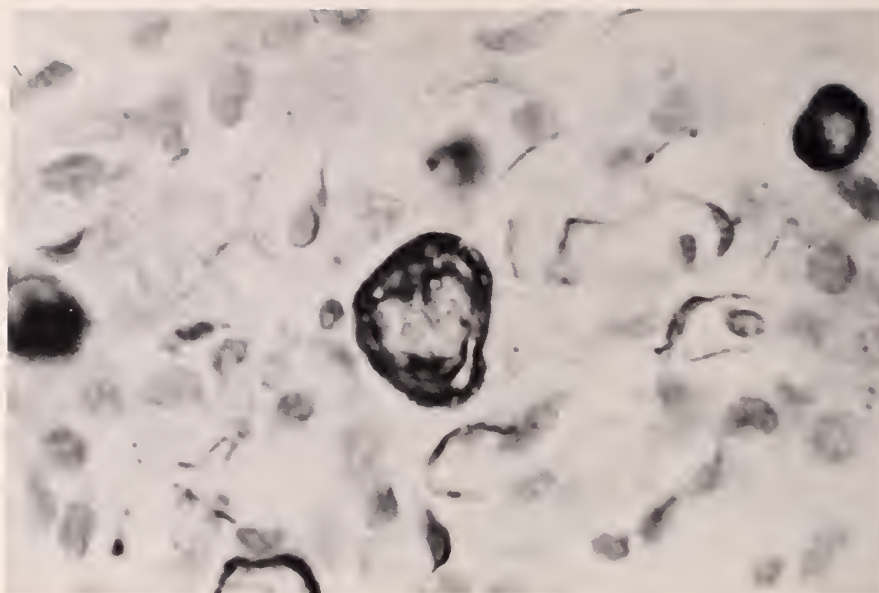


FIGURE 3
TUMOR CELLS CONTAINED ABUNDANT CYTOKERATIN, A FEATURE OF CARCINOMAS — (Immunoperoxidase AE1/AE3, original magnification x 400)

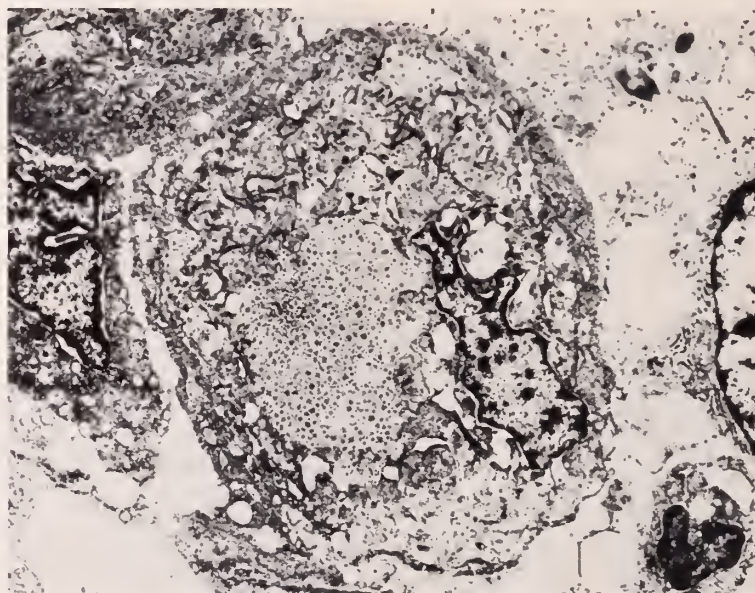


FIGURE 4
ULTRASTRUCTURALLY TONOFIBRILLAR BUNDLES INDICATIVE OF EPITHELIAL DIFFERENTIATION WERE PRESENT — (Electron micrograph courtesy of Dr. Marc Hapke).

Clarkson Memorial Hospital, showing intercellular desmosome and tonofibrillar bundles within the neoplastic cells (Figure 4). In some cells intracellular spaces lined by microvilli were present, a feature of adenocarcinoma. The origin of this patient's malignancy is difficult to resolve with the pathologic and clinical information at hand. Primary car-

cinoma of the lung frequently spreads through the lymphatics, and may fill the subpleural lymphatic plexus. Diffuse permeation of the pulmonary lymphatics also occurs in a variety of malignancies which secondarily involve the lung. This condition, described by Bristowe, is referred to as lymphangitis carcinomatosa or lymphangitic carcinoma of the lung. Carcinoma

arising in the breast, stomach, prostate, pancreas, and ovary may spread through the lungs in this fashion.⁷ In North America nearly half of the cases are from carcinoma of the breast.⁸

Bronchiolo-alveolar cell carcinoma was mentioned as a diagnostic consideration. This neoplasm diffusely infiltrates the lung and may resemble lymphangitic carcinoma. The cells of bronchiolo-alveolar carcinoma typically grow in an intra-alveolar pattern, a feature not present in the lung biopsies of this patient. Also, the tumor cells in this case did not produce abundant mucin, which is a characteristic feature of bronchiolo-alveolar cell carcinoma.⁹ Thus, there is little support for a diagnosis of bronchiolo-alveolar cell carcinoma in this patient.

In summary, this patient had lymphangitic spread of a poorly differentiated adenocarcinoma, possibly derived from the lung or the breast. However, the other organs mentioned in Dr. Moore's differential diagnosis may cause this condition. With the material available for our study, it was not possible to confirm the origin of the neoplasm. An autopsy was not done on this patient.

Dr. Monsour: The CA 125, can we do that here?

Dr. Linder: Yes, through cooperation with a reference laboratory. I might mention, however, that CA 125 is an example of one of many monoclonal antibodies described in the literature over the past 10 years. The initial reports were quite enthusiastic about this being a specific tumor marker for ovarian cancer.

Subsequently, elevated CA 125 titers have been sporadically identified in patients with lung, breast, and pancreatic cancer.¹⁰

Dr. Austin Thompson: Did she die?

Dr. Monsour: Yes, she did.

References

1. Harris EN, Hughes GRV, Gharavi AE: Anti-cardiolipin Antibodies and the Lupus Anticoagulant. *Clinical & Experimental Rheumatology*, 4:187-190, 1986.
2. Revised Criteria for the Classification of Systemic Lupus Erythematosus. *Primer on the Rheumatic Diseases*, Eighth Edition, pg 211.
3. Bast Jr., RC, Feeney M, Lazarus H, Nadler LM, Colvin RB, Knapp RC: Reactivity of a Monoclonal Antibody with Human Ovarian Carcinoma, *J Clin Invest*, 68:1331-1337, Nov. 1981.
4. Bast Jr., RC, Klug TL, St. John E, Jenison E, Niloff JM, Lazarus H, Berkowitz RS, Leavitt T, Griffiths CT, Parker L, Zurawski Jr., VR, Knapp RC: A Radioimmunoassay using a Monoclonal Antibody to Monitor the Course of Epithelial Ovarian Cancer. *NEJM*, Vol 309, #15, pg 883-887.
5. Klug TL, Bast Jr., RC, Niloff JM, Knapp RC, Zurawski Jr., VR: Monoclonal Antibody Immunoradiometric Assay for an Antigenic Determinant (CA 125) Associated with Human Epithelial Ovarian Carcinomas. *Cancer Research*, 44:1048-1053, March 1984.
6. Berg AR, Linder J, Anderson RW, Tempero MA, Edney JA, Armitage JO: The Undifferentiated Malignant Neoplasm. *J Am Med Assoc*, 254:2625, 1985.
7. Janower ML, Blennerhassett JB: Lymphangitic Spread of Metastatic Cancer to the Lung, A Radiologic-Pathologic Classification. *Radiology*, 101:267, 1971.
8. Goldsmith MS, Bailey MD, Callahan EL: Pulmonary Lymphangitic Metastases from Breast Carcinoma. *Arch Surg*, 94:483, 1967.
9. Watson WL, Farpour A: Terminal Bronchiolar or "Alveolar" Cell Carcinoma of the Lung. *Cancer*, 19:776, 1966.
10. Fritscha HA: Some New and Prospective Tumor Markers, Their Nature and Clinical Status. 24:25, 1986.

President's Page

There are many pleasures that go with being President of the Nebraska Medical Association. This opportunity to thank our wonderful staff is one of those. The staff is made up of Bobbie, Janet, Mary, Sue, Jim and Bill. Each and every member of the staff is loyal, dedicated, always pleasant and helpful. One, Bill Schellpeper, has served 25 years. It is with great pleasure that I dedicate this 1987 Fall Session of the House of Delegates of the Nebraska Medical Association to Bill Schellpeper, honoring him for his 25 years of loyal, dedicated service to the Nebraska Medical Association.

Bill was born in Pierce, Nebraska just after the Annual Session of the Nebraska Medical Association in 1938. He was educated in the public school system in Pierce, graduating from Pierce High School in 1956. He attended the University of Nebraska where he attained a Bachelor of Science degree in Business Administration in 1960. That same year he married Betty L. Sperling and they are the parents of two sons, Steven and Russell. Following graduation from the University of Nebraska, Bill returned to Pierce and took over the insurance portion of the bank at Pierce, Nebraska, which was run by his father. He sold insurance for Aetna from September 1960, until April of 1962. He decided that the farmers in and about Pierce would listen to his father as their banker, but not to the young Mr. Schellpeper who grew up in their community. So, he decided that being an insurance salesman was not his cup of tea. He therefore, returned to Lincoln and sought employment with several companies. The same employment agency, that had sent Mr. Neff to the Nebraska Medical Association, sent Bill to the Nebraska Medical Association where he has been employed from April of 1962 to the present time, the first 25 years as Assistant Executive Director, the last 9 months as Executive Director.

Bill and Ken Neff certainly enjoyed a unique relationship through their many years of working together for the Nebraska Medical Association. Ken emphasizes that once Bill assumed a job, Ken never needed to give a second thought as to whether this was



L. Dwight Cherry, M.D.

completed. It always was completed promptly, accurately, and with diligence. Bill was always able to analyze the problems, interpret the information, and to come up with a proper solution. Through the many years that I have known Bill and worked with him, I have always been impressed with his tremendous ability to take care of each and every minute detail. As of January 1, 1987, when he became the Executive Director, I became impressed with his ability to evaluate and handle the overall picture, not just the details. Bill has never been one to "grab the limelight" but is always on top of every situation, nothing ever seems to come as a surprise to him.

Through the many years that Bill and Ken worked together, Ken assures me there were harsh words on only one occasion, and that was when Bill spilled a glass of ice water in Ken's lap at lunch at the Nebraska Club.

Bill has worked hard and has a tremendous knowledge of our lobbying efforts with great insight into our legislators. He at one point felt that he was not accomplishing enough in his lobbying efforts so he induced his cousin, Stan Schellpeper, to run for the state legislature and his cousin is a state legislator.

To attend the American Medical Association with Bill Schellpeper is a wonderful experience. It re-enforces one's impression

that he is on top of all problems. His knowledge of the many problems facing organized medicine is outstanding. The respect shown by his fellow executive directors, especially in the North Central Medical Conference, is tremendous. They look forward to his input and respect his opinions. The physicians as well as medical directors know he is a friend.

Ken Neff tells the story of the first time Bill went to an AMA meeting in Chicago as an Assistant Executive Director. They went to a nice restaurant, and Ken asked Bill what he

wanted for dinner and Bill said, "Oh, just some roast beef and potatoes and gravy." All of us who have had the pleasure of attending the dinners that Bill has organized for the official family of the NMA at the Chicago convention realize tremendous sophistication has taken place since his first trip to the AMA.

Bill's loyalty to the Nebraska Medical Association, and to medicine as a whole is unsurpassed. Thank you, Bill!

L. Dwight Cherry, M.D.
President



The Auxiliary

MEMBERSHIP

What does membership in the auxiliary mean? It means you are an active part of an organization of physicians' spouses united by a common bond of a common goal: to improve the health and quality of life for all people.

You are either involved in or supporting programs, projects, activities, and educational material dealing with health related issues that concern you, your family, and others. You are being kept informed of legislation dealing with health care. You have the opportunity to help support medical education and research. You receive the Nebraska Newsletter and the National Facets magazine plus have direct access to all publications to be used to keep others and yourself informed of specific interests.

The American Medical Association has established an "Adolescent Health Initiative" to reduce morbidity and mortality in this population group and to emphasize positive approaches to help adolescents grow into healthy adults. The AMA Auxiliary has adopted participation in this initiative by targeting concerns of substance abuse, sexuality and pregnancy, victimization, psychological disorders and suicide, violence/trauma, and the development of healthy lifestyles. The Nebraska State Medical Auxiliary will be active in planning programs and distributing educational material concerning this.

If you do not have the time to give of yourself, by joining you are still supporting all of the goals of the auxiliary; we all serve in different capacities at different times. The question is not necessarily what can the auxiliary do for me but what can I do for others and myself through the auxiliary.

Sally Becker
Membership Chairman

JOIN TO BE A MEMBER-AT-LARGE

The NEBRASKA MEDICAL ASSOCIATION invites your spouse to become a member. If your county has an organized auxiliary, please encourage your spouse to join at the county, state and national levels. For counties that do not have an organized auxiliary, your spouse may join us as a **MEMBER-AT-LARGE** by paying state and national dues.

As a member-at-large, your spouse will receive the State Auxiliary Newsletter with news of activities in the state. Your spouse will also receive "FACETS", the national magazine with timely articles written specifically for the physician's spouse.

Your spouse will have access to a wealth of information on such topics as child abuse, physical and mental fitness, drunken driving, teenage suicide, and more.

Dues are \$22.50 (\$15 for national and \$7.50 for state). Remember, you can only be a Member-at-Large if you have NO local auxiliary. Please fill out the form below, make your check payable to the Nebraska Medical Association Auxiliary.

Thank You
Jeanette Schlichtemeier,
MAL Chairman

NAME: _____

ADDRESS: _____

PHONE: _____

AMOUNT: \$22.50

MAIL TO: Jeanette Schlichtemeier
2018 South 151 Street
Omaha, Nebraska 68144

Coming Meetings

NMA ANNUAL SESSION — April 29-May 2, 1988, Omaha Marriott.

NMA FALL SESSION — September 22-24, 1988, Cornhusker Hotel.

UNIVERSITY OF NEBRASKA MEDICAL CENTER

EMERGENCY MEDICINE REVIEW — September 21-26, and October 5-10, 1987 at the Center for Continuing Education, UNMC, Omaha, NE 45 hours of ACEP Category I credit and 45 prescribed hours by the AAFP and AMA Category I.

UNIVERSITY OF NEBRASKA COLLEGE OF MEDICINE ALUMNI ASSOCIATION — ALUMNI ROUNDUP AND RECEPTION in Omaha — Monday, October 26, 1987, 6-7:30 p.m., Red Lion Inn Ballroom — in conjunction with the Omaha Mid-West Clinical Society Postgraduate Assembly. Hors D'oeuvres and Cash Bar. All alumni, spouses, faculty, friends and students are cordially invited. Followed at 7:45 p.m. with 50-year Dinner honoring the CLASS of 1937 - Nebraska Room, Red Lion Inn. CLASS REUNIONS will be held October 25 and October 27 for classes ending in "7" and "2".

For further information or to register for the above courses contact: Marge Adey or Brenda Ram, Center for Continuing Education, University of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, Nebraska 68105. Telephone (402) 559-4152.

UPCOMING CME COURSES

EMERGENCY MEDICINE REVIEW — September 21-26, 1987, Omaha, Nebraska.

EMERGENCY MEDICINE REVIEW — October 5-10, 1987, Omaha, Nebraska

GASTROENTEROLOGY UPDATE — October 21, 1987, Holiday Inn, Hastings, Nebraska

SYSTEMIC VASCULITIS — October 31, 1987, Omaha, Nebraska

GERONTOLOGY PROGRAM — November 13, 1987, Omaha, Nebraska

34TH SCIENTIFIC SESSION - NEBRASKA OB/GYN SOCIETY — December 3-6, 1987, Bally's, Las Vegas, Nevada

8TH ANNUAL MEDICAL SKI CONFERENCE — February 21-25, 1988, Keystone Colorado

8TH ANNUAL ENT SKI CONFERENCE — March 5-11, 1988, Keystone Lodge, Colorado

DRUG THERPY CIRCUIT COURSE — March 16, 1988, Holiday Inn, Hastings, Nebraska

FAMILY PRACTICE REVIEW — April 18-29, 1988, Omaha, Nebraska

FAMILY PRACTICE REVIEW — May 9-20, 1988, Omaha, Nebraska

INTERNATIONAL SYMPOSIUM ON INFLAMMATORY HEART DISEASE — July 27-31, 1988, Snowmass, Colorado

CARDIOVASCULAR DISEASE PREVENTION IN THE YOUNG AND ADULT — July 31-August 3, 1988, Snowmass, Colorado

EMERGENCY MEDICINE REVIEW—September 19-24, 1988, Omaha, Nebraska

EMERGENCY MEDICINE REVIEW — October 3-8, 1988, Omaha, Nebraska

To register and for further information contact: Marge Adey or Brenda Ram, Center for Continuing Education, University of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, Nebraska 68105. Telephone (402) 559-4152.

CREIGHTON UNIVERSITY

CONTROVERSIES AND CLINICAL MANAGEMENT IN HIGH RISK OBSTETRICS — October 29-31, 1987, Claremont Resort Hotel, Oakland, California. Program Director: Washington C. Hill, M.D. Fee:

\$350 for physicians, \$240 for nurses and residents if paid before Sept. 29. 16.5 credit hours Category 1.

VISITING PROFESSOR SCHEDULE — 1987

DR. JOHN CAMERON — Was scheduled for September, 1987, postponed until March, 1988. Dr. Cameron is Surgeon-in-Chief, The John Hopkins University, Department of Surgery, Baltimore, Maryland.

CHARACTERISTIC BEHAVIOR OF CANCER OF THE ESOPHAGUS — October 10, 1987 - Hiroshi Akiyama, M.D., Room 6712, Health Professions Center, Saint Joseph Hospital.

THE SPECIFIC ROLE OF ADJUNCTIVE TREATMENT OF MALIGNANT MELANOMA — October 24, 1987 - Hiram Polk, Jr., M.D., Boys Town National Institute Auditorium, 555 North 30th Street.

For further information or to register, contact: Creighton University School of Medicine Division of CME, Omaha, NE 68178, 402-280-2550 or outside Nebraska toll free 800-228-7212, Ext. 2550. The Creighton University School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.

UNIVERSITY OF KANSAS

For information concerning the following continuing education offerings sponsored by the University of Kansas Medical Center contact: Carole Rosen, Promotions Coordinator, Office of Continuing Education, University of Kansas Medical Center, 39th and Rainbow Boulevard, Kansas City, KS 66103 (913) 588-4480.

ALLERGY, IMMUNOLOGY AND RHEUMATOLOGY: REVIEW AND UPDATE — October 9-10, 1987 at the University of Kansas Medical Center. Sponsored by the University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103. Credit: Category I AMA, AAFP. Contact: Eileen Buttron, University of Kansas Medical

Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103, (913) 588-4480.

MEDICINE AND RELIGION: ISSUES IN THE EIGHTIES — October 20-21, 1987 to be held at Kansas City, Kansas. Sponsored by University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103. Credit: AMA, AAFP, CNE, SW, Clergy. Contact: Eileen Buttron, University of Kansas Medical Center, Office of Continuing Education, 39th and Rainbow Blvd., Kansas City, Kansas 66103, (913) 588-4480.

LANCASTER COUNTY MEDICAL SOCIETY

"CLINICAL UPDATE-III" PROGRAM SHEET — Saturday, November 14, 1987. Sponsored by the Lancaster County Medical Society, Bryan Memorial Hospital, Lincoln General Hospital and St. Elizabeth Community Health Center. There will be a variety of topics with many different doctors covering each topic. Located at the Nebraska Center for Continuing Education, 33rd & Holdrege Street, (Phone 472-3435) Lincoln, Nebraska. There is no registration fee, but to obtain a registration form contact: P.D. Duensing, Ed.D., Executive Secretary, Lancaster County Medical Society 2966 "O" Street - Lincoln, NE 68510.

NATIONAL JEWISH CENTER FOR IMMUNOLOGY AND RESPIRATORY MEDICINE

NATIONAL JEWISH CENTER FOR IMMUNOLOGY AND RESPIRATORY MEDICINE KEYSTONE SUMMIT — February 3-7th, 1988 at Keystone Colorado. A tribute to: Richard Farr, M.D. Topics: Allergy, Asthma, Pharmacology, Advances in Immunology, Diagnostic Testing and more. Registration fee: \$325.00 — \$165.00 for Allied Health and Physicians in Training. 16.5 hours of AMA Category 1 Credit. For brochure and more information contact: Jeri Wagner, National Jewish Center for Immunology and Respiratory Medicine, 1400 Jackson Street, Denver, CO 80206, 303-398-1000.

**UNIVERSITY OF COLORADO
SCHOOL OF MEDICINE
Summer and Fall 1987**

FAMILY PRACTICE REVIEW — October 5-10, 1987, Denver, CO. Sponsored by the University of Colorado School of Medicine, Office of Continuing Medical Education, 4200 East 9th Ave., Box C-295, Denver, CO 80262. (303) 394-5195.

SCHEDULED MEETINGS

55TH ANNUAL POSTGRADUATE ASSEMBLY OMAHA, MID-WEST CLINICAL SOCIETY — October 26, 27 and 28, 1987 Red Lion Inn, Omaha. For information please contact: Lorraine E. Seibel, Executive Secretary, Omaha Mid-West Clinical Society, 7363 Pacific Street, Suite 205-B, Omaha, Nebraska 68114.

AMA News Notes

The AMA and Rush-Presbyterian-St. Luke's Medical Center will conduct a one-day course on flow cytometry in Chicago Oct. 7. Modern flow cytometry is a diagnostic tool that can be applied to transplantation, oncology, acquired immune deficiency syndrome, and other infectious diseases.

"Flow Cytometry in Clinical Medicine" has been designed to educate the novice, the course planner, say, and to update those knowledgeable about the technology and will include hands-on demonstrations of flow cytometry instrumentation.

For more information, contact R. Mark Evans, PhD, AMA Office of Biotechnology, 535 N. Dearborn St., Chicago, Ill. 60610; (312) 645-4567.

* * *

Following up on a resolution passed during the 1986 Interim Meeting, Executive Vice President James H. Sammons recently sent a letter to state public health departments affirming AMA's support for fluoridation of water supplies.

The letter called on these agencies to renew efforts to bring fluoridation to all communities within their jurisdictions. He said the AMA recognizes that fluoridation often has been controversial in some communities but emphasized that its benefits outweigh the dangers. Dr. Sammons encouraged the public health agencies to educate the public to allay their fears and called on them to enlarge the scope of their community fluoridation programs.

* * *

Research access to marijuana should continue, but the plant materials should remain in Schedule I of the Controlled Substance Act, says James H. Sammons, M.D., AMA executive vice president.

In a recent letter to Drug Enforcement Administrator John C. Lawn, Dr. Sammons pointed out that dronabinol and nabilone, marijuana derivatives, have proved safe and effective as antiemetics for some cancer patients, and that the Food and Drug Admini-

stration approved a new drug application for a dronabinol product.

Other therapeutic uses of marijuana derivatives have not been proved, Dr. Sammons added, so the plant materials should remain in the Schedule I category unless and until researchers establish safety and effectiveness in managing other medical conditions, such as glaucoma, hypertension, epilepsy, and spasticity.

* * *

Is the AMA retaining its members?

Division of Membership analysts say that the AMA's retention rate has been extremely high in recent years. Retention rate is defined as the percentage of AMA members in one year who continued as members from the previous year. It is used as a measure of how well the Association is meeting membership needs.

An analysis of membership renewals for the years 1983-85 showed that an average of 88.5% of dues-paying members in any of the years renewed their memberships into the next year. However, renewal rates differed among the various membership categories.

In brief, according to the analysis, the renewal rate was higher for those who paid full-year dues. Those who joined the AMA through the state and county medical societies also were more likely to renew, rather than those who joined the AMA directly. Male physicians were more likely to renew their memberships than were female physicians.

* * *

At its October, 1987, meeting, the AMA Board of Trustees will select recipients for the following awards: AMA-ERF Award for Health Education 1987, Distinguished Service Award for 1988, Citation of a Layman for Distinguished Service 1988, Scientific Achievement Award 1988, and the Dr. Benjamin Rush Bicentennial Award for Citizenship and Community Service 1987.

The deadline for nominations is Sept. 11. Information on AMA awards may be obtained by calling Neil Sutherland at AMA headquarters, (312) 645-4344.

BREAST CANCER: CURRENT CONCEPTS AND CONTROVERSIES

1987 HOWARD B. HUNT CANCER SEMINAR

SATURDAY, DECEMBER 5, 1987

METHODIST HOSPITAL Omaha, Nebraska

SYDNEY E. SALMON, M.D.
Professor of Internal Medicine and
Director, Arizona Cancer Center
University of Arizona at Tucson

ROBERT L. GOODMAN, M.D.
Chairman, Department of Radiation Therapy
Hospital of the University of Pennsylvania
in Philadelphia

WILLIAM L. DONEGAN, M.D.
Professor of Surgery
Medical College of Wisconsin
Chief of Surgery, Mount Sinai Medical Center
in Milwaukee, Wisconsin

For further information contact (402) 390-4035

AMA News Notes

(continued from page 13-A)

Administration (HCFA) to a relative value scale (RVS) system now being researched by the AMA and Harvard U.

The AMA position is that the traditional CPR payment system is inflationary, impedes price competition, and maintains historical distortions in physicians' charge patterns. In contrast, the AMA says, an RVS, in which procedures are ranked according to complexity and the amount of resources used, will produce an equitable reimbursement of physician services.

Single copies of the AMA booklet are available free through October to anyone interested in writing the AMA Dept. of Health Care Financing, 535 N. Dearborn St., Chicago, Ill. 60610.

* * *

A new brochure on teen sexuality is now available from the AMA Auxiliary.

The brochure, which is the eighth in the Auxiliary's "Shape up for Life" series, outlines pressures on teens to be sexually active. A spokeswoman for the Auxiliary said the brochure was published "to compliment the AMA's adolescent health initiative."

Problems arising from teen pregnancy and sexually transmitted diseases, including AIDS, and solutions to these problems are some of the topics covered.

The subject of teen sexuality is also covered in the July edition of *Facets*, the AMA Auxiliary's magazine, in an article titled "Teen Sexuality: Beyond Statistics."

Those interested in ordering the brochure can contact Betsy Davis, AMA Auxiliary, (312) 645-4472.

* * *

The AMA is urging MDs to relate their experiences, positive and negative, with peer review organizations (PROs).

(continued on page 24-A)

Nebraska Medical Association Officers and Commissions

OFFICERS

L. Dwight Cherry, M.D., Lincoln.....	President
C. A. McWhorter, M.D., Omaha.....	President-Elect
Robert F. Shapiro, M.D., Lincoln.....	Secretary-Treasurer
William L. Schellpeper, Lincoln.....	Executive Director
James K. Ruigh, Lincoln.....	Assistant Executive Director

AMA Delegates — C. J. Cornelius, Jr., M.D., Sidney;
John D. Coe, M.D., Omaha; Louis J. Gogela, M.D.,
Lincoln; Blaine Y. Roffman, M.D., Omaha.

BOARD OF DIRECTORS

L. Dwight Cherry, M.D., Kearney.....	Chairman
C. A. McWhorter, M.D., Omaha.....	Vice-Chairman
Robert F. Shapiro, M.D., Lincoln.....	Secretary-Treasurer
Hiram R. Walker, M.D., Kearney.....	Past President
Paul E. Collicott, M.D., Lincoln.....	
Richard A. Raymond, M.D., O'Neill.....	
Donald J. Pavelka, M.D., Omaha.....	
Richard H. Meissner, M.D., Omaha.....	
Harry R. McFadden, M.D., ProTem.....	
C. T. Frerichs, M.D., Beatrice.....	

COMMISSION ON ASSOCIATION AFFAIRS

Harry W. McFadden, M.D., Chairman.....	Omaha
R. A. Blatny, M.D., Fairbury.....	
Stuart P. Embury, M.D., Holdrege.....	
Joel T. Johnson, M.D., Kearney.....	
Bernard L. Kratochvil, M.D., Omaha.....	
Walter O'Donohue, M.D., Omaha.....	
Herbert E. Reese, M.D., Lincoln.....	
Joseph E. Sticher, M.D., Lincoln.....	
R. C. Weldon, M.D., Nebraska City.....	

SCIENTIFIC SESSIONS COMMITTEE

Sushil S. Lacy, M.D., Chairman.....	Lincoln
Mark A. Christensen, M.D., Convention Chairman.....	Omaha
David L. Bacon, M.D., Kearney.....	
Robert A. Beer, M.D., Omaha.....	
Mark A. Christensen, M.D., Omaha.....	
Richard A. Hranac, M.D., Kearney.....	
Donald J. Larson, M.D., Lincoln.....	
Richard M. Tempero, M.D., Omaha.....	
Donald E. Waltemath, M.D., Lincoln.....	
Rick J. Windle, M.D., Lincoln.....	
Richard S. Yates, M.D., Lincoln.....	
Eugene M. Zweiback, M.D., Omaha.....	

COMMISSION ON MEDICAL SERVICES

William L. Rumbolz, M.D., Chairman.....	Omaha
Carl J. Cornelius, Jr., M.D., Sidney.....	
Richard A. Hranac, M.D., Kearney.....	
F. William Karrer, M.D., Omaha.....	
Dale E. Michels, M.D., Lincoln.....	
Merton Quaife, M.D., Omaha.....	
Kenton L. Shaffer, M.D., Kearney.....	

AD-HOC COMMITTEE ON MATERNAL & CHILD HEALTH

Kenton L. Shaffer, M.D., Chairman.....	Kearney
Section on Maternal Mortality Review	
George M. Adam, M.D., Hastings.....	
James G. Cummins, M.D., Omaha.....	
L. Palmer Johnson, M.D., Lincoln.....	
Gary D. Milius, M.D., Lincoln.....	
William F. Rayburn, M.D., Omaha.....	
William L. Rumbolz, M.D., Omaha.....	
Larry Wilson, M.D., Gothenburg.....	
Section on Perinatal Mortality Review	
Lawrence C. Bausch, M.D., Lincoln.....	
Stacie R. Bleicher, M.D., Omaha.....	
Robert M. Nelson, M.D., Lincoln.....	
Gregg F. Wright, M.D., Lincoln.....	

AD-HOC COMMITTEE ON GERIATRICS

Richard A. Hranac, M.D., Chairman.....	Kearney
Ronald L. Asher, M.D., North Platte.....	
James Carraher, M.D., Lincoln.....	
J. Whitney Kelley, M.D., Omaha.....	
Jane F. Potter, M.D., Omaha.....	
Richard Thompson, M.D., Lincoln.....	
John A. Ursick, M.D., Omaha.....	
Vernon G. Ward, M.D., Omaha.....	

AD-HOC COMMITTEE ON ALTERNATE HEALTH PLANS

Dale E. Michels, M.D., Chairman.....	Lincoln
Lonnie S. Albers, M.D., Lincoln.....	
Vernon F. Garwood, M.D., Lincoln.....	
Robert L. Haag, M.D., Lincoln.....	
Michael J. Haller, M.D., Omaha.....	

Roger D. Mason, M.D., Omaha.....	
Margaret A. Moravec, M.D., Lincoln.....	
Richard H. Meissner, M.D., Omaha.....	
Dwaine J. Peetz, Jr., M.D., Omaha.....	
Layton F. Rikkers, M.D., Omaha.....	
Sebastian J. Troia, M.D., Omaha.....	

COMMITTEE ON HEALTH PLANNING

Carl J. Cornelius, Jr., M.D., Chairman.....	Sidney
Gordon D. Adams, M.D., Norfolk.....	
Lewiston W. Birkmann, M.D., Lincoln.....	
James S. Carson, M.D., McCook.....	
Chris C. Caudill, M.D., Lincoln.....	
Allen D. Dvorak, M.D., Omaha.....	
Dale W. Ebers, M.D., Lincoln.....	
Louis J. Gogela, Jr., M.D., Beatrice.....	
Roger D. Mason, M.D., Omaha.....	
Donald F. Prince, M.D., Minden.....	
C. Lee Retelsdorf, M.D., Omaha.....	
Thomas H. Wallace, M.D., Gordon.....	

AD-HOC COMMITTEE ON TUMOR REGISTRY

F. William Karrer, M.D., Chairman.....	Omaha
Elvin G. Brown, M.D., Hastings.....	
John H. Casey, M.D., Lincoln.....	
James R. Commers, M.D., Omaha.....	
Sushil S. Lacy, M.D., Lincoln.....	
Donald R. Owen, M.D., Omaha.....	
C. Lee Retelsdorf, M.D., Omaha.....	
Ron D. Scott, M.D., Kearney.....	

AD-HOC COMMITTEE ON LOW LEVEL RADIATION WASTE DISPOSAL

Merton A. Quaife, M.D., Chairman.....	Omaha
Prentiss M. Dettman, M.D., Lincoln.....	
Allen D. Dvorak, M.D., Omaha.....	
David J. Hoelting, M.D., Pender.....	
Ernest O. Jones, Ph.D., Omaha.....	
Martin R. Lohff, M.D., Omaha.....	
W. E. Lundak, M.D., Lincoln.....	
William H. Northwall, M.D., Kearney.....	
Jerald R. Schenken, M.D., Omaha.....	

COMMISSION ON LEGISLATION AND GOVERNMENTAL AFFAIRS

Ronald L. Klutman, M.D., Chairman.....	Columbus
Robert G. Osborne, M.D., Vice-Chairman.....	Lincoln
Rodney S. W. Basler, M.D., Lincoln.....	
James H. Dunlap, M.D., Norfolk.....	
Dale W. Ebers, M.D., Lincoln.....	
Richard D. Fitch, M.D., O'Neill.....	
Vernon F. Garwood, M.D., Lincoln.....	
Charles Gregorius, M.D., Lincoln.....	
Bruce W. Henricks, M.D., Fremont.....	
Barbara M. Heywood, M.D., Papillion.....	
Mark R. Hutchins, M.D., Lincoln.....	
Max W. Linder, M.D., Lincoln.....	
Ann E. Lott, M.D., Lincoln.....	
William R. Marsh, M.D., Grand Island.....	
John T. McGreer, III, M.D., Lincoln.....	
Dennis G. O'Leary, M.D., Omaha.....	
George W. Orr, M.D., Omaha.....	
Dwaine J. Peetz, M.D., Neligh.....	
Herbert E. Reese, M.D., Lincoln.....	
C. Lee Retelsdorf, M.D., Omaha.....	
Blaine Y. Roffman, M.D., Omaha.....	
Jerald R. Schenken, M.D., Omaha.....	
Todd S. Sorensen, M.D., Scottsbluff.....	
Richard B. Svehla, M.D., Omaha.....	
Timothy O. Wahl, M.D., Omaha.....	

AD-HOC COMMITTEE ON HEALTH POLICY STATEMENTS

C. Lee Retelsdorf, M.D., Chairman.....	Omaha
Daniel S. Durrie, M.D., Omaha.....	
Joel T. Johnson, M.D., Kearney.....	
Darroll J. Loschen, M.D., York.....	
Dale E. Michels, M.D., Lincoln.....	
Stanley F. Nabity, M.D., Grand Island.....	
John F. Porterfield, M.D., Lincoln.....	
Gerald Rounsberg, M.D., North Platte.....	
Charles S. Wilson, M.D., Lincoln.....	

AD-HOC COMMITTEE ON PROFESSIONAL LIABILITY

James H. Dunlap, M.D., Chairman	Norfolk
David L. Bacon, M.D.	Kearney
Warren G. Bosley, M.D.	Grand Island
Ernest W. Chupp, M.D.	Omaha
F. M. Gawecki, M.D.	Papillion
Dwaine J. Peetz, M.D.	Neleigh
Richard M. Pitsch, Jr., M.D.	Lincoln
Herbert E. Reese, M.D.	Lincoln
Blaine Y. Roffman, M.D.	Omaha

COMMISSION ON MEDICAL EDUCATION

Frederick F. Paustian, M.D., Chairman	Omaha
Robert L. Bass, M.D.	Elkhorn
Warren G. Bosley, M.D.	Grand Island
Patrick E. Brookhouser, M.D.	Omaha
Charles F. Damico, M.D.	Hastings
Charles A. Dobry, M.D.	Omaha
A. Dean Gilg, M.D.	Lincoln
William E. Lundak, M.D.	Lincoln
Richard L. O'Brien, M.D.	Omaha
Dwaine J. Peetz, Jr., M.D.	Omaha
Joseph C. Scott, M.D.	Omaha
Robert H. Waldman, M.D.	Omaha

AD-HOC COMMITTEE ON HEALTH EDUCATION & ATHLETIC MEDICINE

Warren G. Bosley, M.D., Chairman	Grand Island
Patrick E. Clare, M.D., Vice-Chairman	Lincoln
Richard W. Hammer, M.D.	Lincoln
Stephen J. Lanspa, M.D.	Omaha
Morris B. Mellon, M.D.	Omaha
Paul H. Phillips, M.D.	Scottsbluff
Richard A. Raymond, M.D.	O'Neill
Eileen C. Vautravers, M.D.	Lincoln
Hobart E. Wallace, M.D.	Lincoln
Wesley G. Wilhelm, M.D.	Omaha
Gregg F. Wright, M.D.	Lincoln

COMMISSION ON PUBLIC AFFAIRS

Rodney S. W. Basler, M.D., Chairman	Lincoln
H. Jeffrey Deeths, M.D.	Omaha
Herbert D. Feidler, M.D.	Norfolk
Edward E. Gatz, M.D.	Omaha
Donald T. Glow, M.D.	Omaha
John J. Hoelsing, M.D.	Omaha
Roger P. Massie, M.D.	Plainview
Donald E. Matthews, M.D.	Lincoln
Harlan C. Shriner, M.D.	Lincoln
F. Thomas Waring, M.D.	Fremont

COMMISSION ON HOSPITAL MEDICAL STAFF

Glen F. Lau, M.D., Chairman	Lincoln
Charles Heider, Jr., M.D.	North Platte
Harry E. Keig, M.D.	Papillion
Barney B. Rees, M.D.	Omaha
Joseph G. Rogers, M.D.	Lincoln
Larry D. Ruth, M.D.	Lincoln
Steven A. Schwid, M.D.	Omaha
Jerry K. Seiler, M.D.	Hastings
William A. Shiffermiller, M.D.	Omaha
Stephen D. Torpy, M.D.	Omaha

AD-HOC COMMITTEE ON HEALTH GALLERY

Russell L. Gorthey, M.D., Chairman	Lincoln
Warren G. Bosley, M.D.	Grand Island
Glen F. Lau, M.D.	Lincoln
Richard C. Olney, M.D.	Lincoln
John L. Reed, M.D.	Lincoln
Stanley M. Truhlsen, M.D.	Omaha

AD-HOC COMMITTEE ON YOUNG PHYSICIANS

Richard A. Raymond, M.D., Chairman	O'Neill
Gary W. Barth, M.D.	Hastings
John I. Cherry, M.D.	Lincoln
Norman Grosbach, M.D.	Omaha
Herbert A. Hartman, Jr., M.D.	Omaha
Katherine A. Keifer, M.D.	Kearney
Jeanette L. Masek, M.D.	Lincoln
Kirk B. Muffy, M.D.	Omaha
Timothy P. O'Holleran, M.D.	North Platte
Mark D. Pilley, M.D.	Omaha
Bradley D. Rodgers, M.D.	Holdrege
William A. Shiffermiller, M.D.	Omaha
Vincent J. Sutton, M.D.	Hastings

NMA PRO OVERVIEW COMMITTEE

M. Jack Mathews, M.D., Chairman	Lincoln
David Bacon, M.D.	Kearney
Steven T. Bailey, M.D.	Omaha
A. H. Bergman, M.D.	Fremont
Dennis M. Connolly, M.D.	Lincoln
Carl J. Cornelius, Jr., M.D.	Sidney
Richard A. Cottingham, M.D.	McCook
Francis D. Donahue, M.D.	Omaha
Daniel S. Durrie, M.D.	Omaha
John F. Fitzgibbons, M.D.	Omaha
C. T. Frerichs, M.D.	Beatrice
Gordon J. Hrnicek, M.D.	Grand Island
Frederick F. Paustian, M.D.	Omaha
Richard A. Raymond, M.D.	O'Neill
Herbert E. Reese, M.D.	Lincoln

AD-HOC COMMITTEE RE: BLUE SHIELD OF IOWA-MEDICARE

Paul E. Collicott, M.D., Chairman	Lincoln
R. A. Blatny	Fairbury
Steve Brase	Lincoln
Thomas M. Connors, M.D.	Omaha
Bob Gallion	Lincoln
Vernon Garwood, M.D.	Lincoln
Roger Massie, M.D.	Plainview
Mrs. Janice Olson	Lincoln
Donald Pavelka, M.D.	Omaha
Richard B. Svehla, M.D.	Omaha
Hiram R. Walker, M.D.	Kearney

AD-HOC COMMITTEE ON MEDICAID SERVICES

Chris C. Caudill, M.D., Chairman	Lincoln
Judith A. Butler, M.D.	Superior
Dale W. Ebers, M.D.	Lincoln
Russell L. Gorthey, M.D.	Lincoln
Roger A. Jacobs, M.D.	Seward
Ronald Klutman, M.D.	Columbus
Harold M. Nordlund, M.D.	York
Richard B. Svehla, M.D.	Omaha
M. Allen Tompkins, M.D.	Grand Island
Craig L. Urbauer, M.D.	Lincoln

NEBRASKA MEDICAL ASSOCIATION

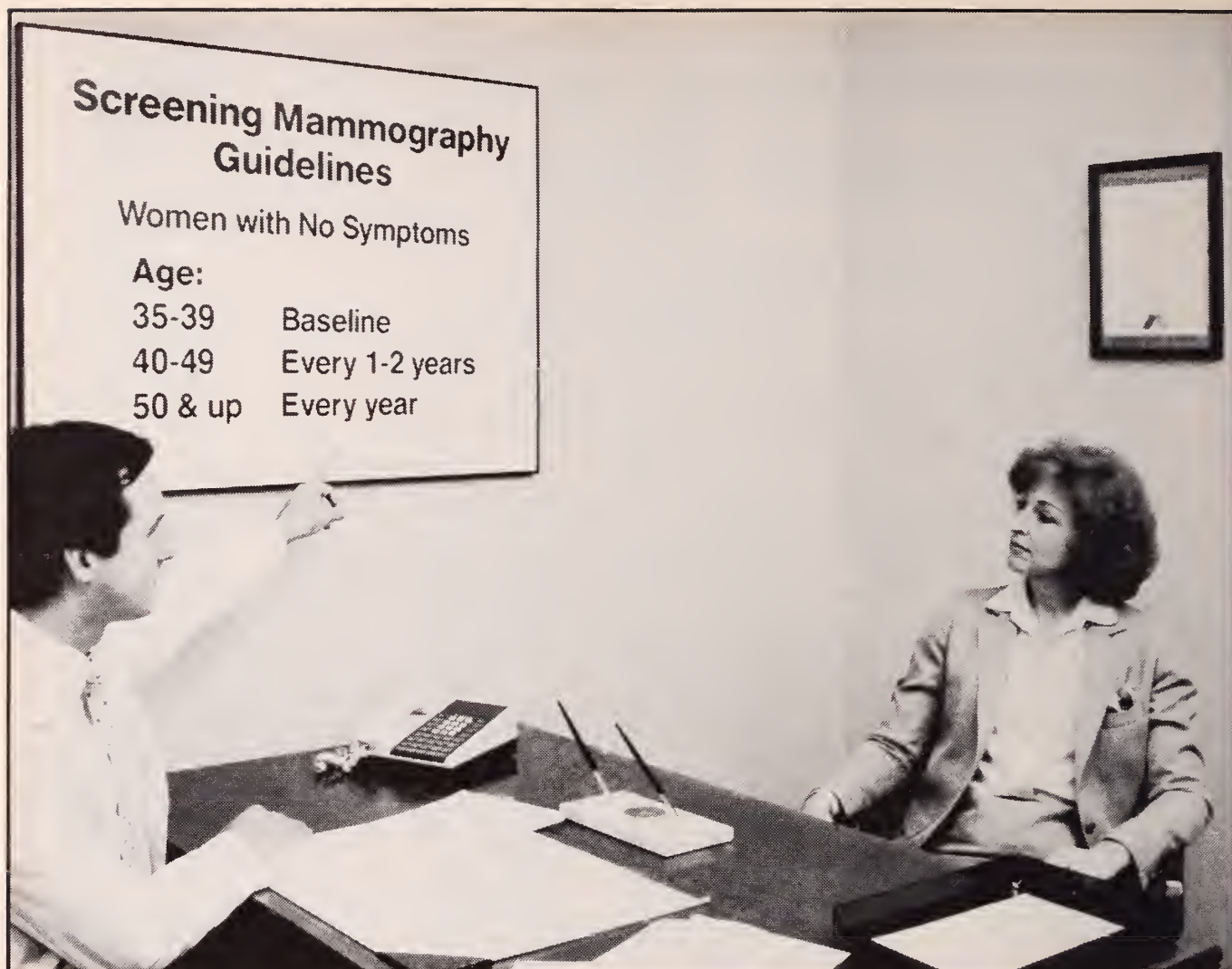
Dates to Remember

120th Annual Session

April 29-May 2, 1988

1988 Fall Session

September 22-24, 1988



What will you tell her about screening mammography?

Many of your patients will hear about screening mammography through a program launched by the American Cancer Society and the American College of Radiology, and they may come to you with questions. What will you tell them?

We hope you'll encourage them to have a screening mammogram, because that, along with

your regular breast examinations and their monthly self examinations, offers the best chance of early detection of breast cancer, a disease which will strike one woman in 10.

If you have questions about breast cancer detection for asymptomatic women, please contact us.



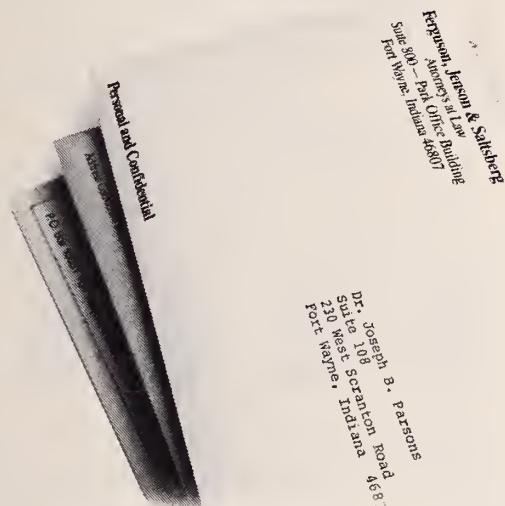
Professional Education Dept.
National Headquarters
90 Park Avenue
New York, New York 10016
or your local society



American
College of
Radiology

1891 Preston White Drive
Reston, Virginia 22091
(703) 648-8900

Crisis in black and white.



Your personal crisis may be waiting in the morning mail. If so, you'll want the best professional help. You'll want a Medical Protective General Agent.

Professional liability coverage is our only business. And we've been providing it for almost 100 years. Our agents live in the territories they serve so they understand the local legal climate. And with the extensive resources of the home office Law Department to draw from, they're always ready to answer your questions or give advice.

Someday it may be you against a negligence charge. When that day comes and your professional reputation is on the line, you're going to want all the help you can get. To make sure you have it, contact your Medical Protective General Agent today.

THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

L. Roger Garner
Suite 114, Corporate Plaza, 11212 Davenport, Omaha, NE 68154, (402) 334-9689

ADVERTISER'S INDEX

	A	
Ayerst Laboratories	7, 8, 9, 10, 16, 17, 18	
	B	
Bishop Clarkson Memorial Hospital.....	11	
	C	
Campbell Laboratories, Inc.	13	
	D	
Donley Medical Supply.....	6	
	F	
Family Practice Recertification.....	14	
	I	
Info-Builders, Inc.....	13	
	L	
Eli Lilly & Co.....	4	
	M	
Medical Protective Co.....	23	
	N	
Nebraska Methodist Hospital.....	19	
Norfolk Printing Co., Inc.....	6	
	R	
Roche Laboratories.....	25, 26	
	S	
Smith Kline & French Labs.....	15	
	U	
U. S. Air Force	2	
Upjohn Company	3	

Drug/Alcohol/Emotional/Other Health Problems

HELP IS AVAILABLE
FOR YOU

FOR A MEMBER OF YOUR FAMILY
FOR A PROFESSIONAL, FRIEND OR
COLLEAGUE

Call
The Physician's Advocacy Committee
(Nebraska Medical Association)
Strictly Confidential — Professional — Effective

For information call:

402-393-3216

(You do not have to give your name.)

Physicians' Classified

Advertisements in this column are run at the rate of \$15.00 per insertion, for an advertisement of 50 words or less. An additional charge of 25¢ per word will be assessed for advertisements exceeding the 50-word limit. Copy must be received by the fifth of the month preceding the date of publication. Each advertisement will be removed following its first appearance unless otherwise instructed. If desired, advertisers may utilize a box number in care of THE NEBRASKA MEDICAL JOURNAL, 1512 First Tier Bank Bldg., Lincoln, NE 68508.

EMERGENCY MEDICINE: In Omaha NE — Full and Part-time positions available in an emergency department for qualified physician seeking lucrative employment opportunities. Outstanding remuneration and comprehensive malpractice insurance provided. For further information contact: Deborah Bergun, Staffing Specialist, National Emergency Services, Inc., 255 Executive Dr., Suite 104, Plainview, NY 11803 or call 1-800-645-4848 or 516-349-0100.

EMERGENCY MEDICINE—NEBRASKA: A full-time emergency department opportunity is currently available to provide coverage at several client hospitals in eastern Nebraska. Guaranteed rate of compensation and high-limit occurrence basis malpractice insurance coverage. Part-time positions are also available. For more information on our Nebraska opportunities, contact Mary Lou Doehrman, Spectrum Emergency Care, 6275 Lehman Dr., Suite C202, Colorado Springs, CO 80918; 1-800-525-3581.

AVAILABLE: Practice opportunity for family practice. Board certified desired. Grand Island, NE. Please reply to Box 030, **Nebraska Medical Journal**, 1512 First Tier Bank Bldg., Lincoln, NE 68508.

YOUR OWN FAMILY PRACTICE: Salary guarantees, financial and other incentive offered. One physician practicing, seeking second, possibly third physician to own and operate clinic. Modern, well-equipped, financially sound, 20-bed hospital with attached clinic and ICF facility. Excellent E.M.T. rescue unit. Strong market area with tremendous potential. Ambitious, supportive community proud of its medical services. Recreation includes golf, tennis, racquetball, fishing, hunting, water skiing, movie theatre, supper club, civic organizations. North Central Accredited public school system. Fine family community. Contact Mike Shafer, Administrator, Fritzer Memorial Hospital, P.O. Box 218, Oxford, NE 68967, phone (308) 824-3271.

LINCOLN: Medical Directorship available at 13,000 volume Emergency Department in 340-bed primary care hospital. Prefer eligible or certified EM physician with administrative experience. Compensation includes stipend plus hourly rate and comprehensive benefit package with life, health, and disability. Professional liability insurance procured on your behalf. For details contact: Tom Baldwin, Coastal Emergency Services, Inc., 425 New Ballas Rd., Suite 295, St. Louis, MO 63141; (314)432-0210, (800)227-2533 (outside MO).

FAMILY PHYSICIAN NEEDED: Immediate need for BC/BE Family Physician to join 2 established Family Physicians in private practice in N.W. Iowa community of 5,000. Modern Clinic across the street from JCAH hospital. Excellent salary and fringe benefits with partnership opportunity. Locum tenens opportunity available also. Call collect (712)324-2511 or contact Sheldon Family Practice Associates, 206 N. 7th Ave., Sheldon, IA 51201.

AMA News Notes

(continued from page 19-A)

The PRO Monitoring Project of the AMA's Dept. of Health Care Review is collecting information on PROs to keep abreast of the federal program. All communications to the monitoring project are confidential.

Information on PROs should be sent to the AMA Peer Review Monitoring Project, P.O. Box 10947, Chicago, Ill. 60610.

* * *

Those who missed the Aug. 1 deadline for AMA Education and Research Foundation (AMA-ERF) clinical nutrition scholarships can still apply for clerkships for June to December, 1988.

AMA-ERF scholarships are still available for third- and fourth-year medical students who apply by Feb. 1, 1988. The clerkship consists of four- to six-week instruction in general, pediatric, and surgical nutrition. Students accepted into the program will receive \$700 for living and travel costs.

Those interested can obtain scholarship applications from the Dept. of Personal Health, AMA, 535 N. Dearborn St., Chicago, Ill. 60610; (312) 645-5073.

* * *

See the difference in the first week¹

- Sleep improvement in 74% of patients after first h.s. dose²
- Significantly faster relief—62% of total four-week improvement evident in first week versus 44% with amitriptyline alone¹
- Dramatic first-week reduction in somatic complaints²

% Reduction in Somatic Symptoms²

Vomiting	Nausea	Headache	Anorexia	Constipation
Reduced 90%	Reduced 86%	Reduced 72%	Reduced 62%	Reduced 60%

- Only 1/3 the dropout rate due to side effects of amitriptyline alone, although the incidence of side effects is similar¹

Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

Copyright ©1987 by Roche Products Inc. All rights reserved.



Protect your decision.
Write "Do not substitute."

In moderate depression and anxiety

Limbitrol[®]

Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) ^{IV}

Limbitrol[®] DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) ^{IV}

References: 1. Feighner JP, et al. *Psychopharmacology* 61:217-225, Mar 22, 1979. 2. Data on file, Hoffmann-La Roche Inc., Nutley, NJ.

Limbitrol[®] ^{IV}

Tranquilizer—Antidepressant

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of moderate to severe depression associated with moderate to severe anxiety.

Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants. Do not use with monoamine oxidase (MAO) inhibitors or within 14 days following discontinuation of MAO inhibitors since hyperpyretic crises, severe convulsions and deaths have occurred with concomitant use, then initiate cautiously, gradually increasing dosage until optimal response is achieved. Contraindicated during acute recovery phase following myocardial infarction.

Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving).

Usage in Pregnancy: Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage, withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline, symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).

Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady state concentrations of the tricyclic drugs.

Concomitant use of Limbitrol with other psychotropic drugs has not been evaluated, sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.

Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring

reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.

The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs.

Cardiovascular: Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.

Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.

Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.

Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.

Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.

Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.

Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.

Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion.

Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. IV administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single h.s. dose may suffice for some patients. Lower dosages are recommended for the elderly. Limbitrol DS (double strength) Tablets, initial dosage of three or four tablets daily in divided doses, increased up to six tablets or decreased to two tablets daily as required. Limbitrol Tablets, initial dosage of three or four tablets daily in divided doses, for patients who do not tolerate higher doses.

How Supplied: Double strength (DS) Tablets, white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and Tablets, blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt). Available in bottles of 100 and 500; Tel-E-Dose[®] packages of 100; Prescription Paks of 50.



ROCHE PRODUCTS INC.
Monro, Puerto Rico 00701

The rewards of Limbitrol You're both smiling again!

See the difference in the first week¹

In depressed and anxious patients, you can see the difference sooner—62% of total four-week improvement achieved in the first week with Limbitrol versus 44% with amitriptyline.¹

In moderate depression and anxiety

Limbitrol[®]

Each tablet contains 5 mg clordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) ^(N)

Limbitrol[®] DS

Each tablet contains 10 mg clordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) ^(N)

ROCHE

Please see summary of product information on adjacent page.

THE NEBRASKA MEDICAL JOURNAL



119
Years



Contents

Editorial

- Time to Change 361
Alan D. Forker, M.D.

Original Articles

- High Frequency Ventilation
in Neonatal Pulmonary
Interstitial Emphysema 362
Brian R. Wood, M.D.
Larry D. Eggert, M.D.
David L. Bolam, M.D.
Robert M. Nelson, Jr., M.D.

- The Role of Radiotherapy
in the Treatment of
Biliary Tract Neoplasms 367
Albert R. Frank, M.D.
D. R. Owens, M.D.

- Fracture of the Month —
Avulsion Fracture of the Patella
with Quadriceps Rupture —
A Frequently Missed Diagnosis
John F. Connolly, M.D.
Lynn A. Crosby, M.D.

Features

- President's Page 376
-
- The Auxiliary 378
-
- CU Medical Center News 379
-
- Coming Meetings 381
-
- Picture Gallery 383

NEW YORK
2 EAST 103RD ST.
LIB-PERIODICALS DEPT
THE N.Y. ACADEMY OF MED.
-622001 AN NY 10029-

"Okay, so I know I need iron. Where do I get it?"

Faced with a Recommended Daily Dietary Allowance of 18 mg, the question is a good one for women aged 19-50. Iron is one of the nutrients most often lacking in the American diet. Low intakes of iron over prolonged time can lead to iron deficiency anemia.

In the 1986 USDA Continuing Survey of Food Intakes by Individuals¹, women of child-bearing years reported a mean intake of 1588 calories a day. Since the American diet averages about 6-7 mg of iron per 1000 calories, it's not surprising that the same survey found that most of these women are getting about 60 percent of their RDA for iron.

Yet consider, one three-ounce serving of lean sirloin contains 2.8 mg of iron, about forty to sixty percent of which is heme iron, the most bioavailable form. In addition, the presence of beef or other meats in a meal increases the bioavailability of nonheme iron from foods such as vegetables and grains.

Importantly, lean beef can also meet fat and cholesterol guidelines of most leading heart and health authorities. The how-to's are good

advice for almost anyone.

Start with "The Skinniest Six" shown below. None is more than 180 calories per three-ounce cooked, trimmed serving. All are easy to specify at the meat counter.

These six cuts also simplify portion control. Four ounces uncooked equals about three ounces cooked. Grilling, broiling and roasting add no extra fat in cooking. And the taste of beef makes it easy to dispense with fat-laden sauces.

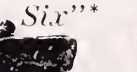
Carefully chosen, prepared and served, "The Skinniest Six" provide an impressive list of essential nutrients for under 180 calories per three-ounce serving.

And as part of a specific plan to increase dietary iron, in a balanced diet beef can be one of the best-tasting recommendations you'll ever make.



BEEF



"The Skinniest Six"*						Composite of cooked retail cuts of beef*	
						Protein	25.9 g
Eye of Round	Round Tip	Top Loin	Top Round	Sirloin	Tenderloin	Iron	2.7 mg
1.65 mg iron	2.50 mg iron	2.10 mg iron	2.45 mg iron	2.85 mg iron	3.05 mg iron	Zinc	6.0 mg
155 calories	162 calories	172 calories	162 calories	177 calories	174 calories	Vitamin B-12	2.28 mcg
5.5 g total fat	6.4 g total fat	7.6 g total fat	5.3 g total fat	7.4 g total fat	7.9 g total fat	Thiamin	.08 mg
(2.1 g saturated fat)	(2.3 g saturated fat)	(3.0 g saturated fat)	(1.8 g saturated fat)	(3.0 g saturated fat)	(3.1 g saturated fat)	Niacin	3.6 mg
59 mg cholesterol	69 mg cholesterol	65 mg cholesterol	72 mg cholesterol	76 mg cholesterol	72 mg cholesterol	Sodium	55 mg
Uncooked whole cuts are shown for purposes of identification.						Total Fat	8.7 g
						(Saturated Fat)	(3.4 g)
						Cholesterol	76 mg
						Calories	189

¹ United States Department of Agriculture. Nationwide Food Consumption Survey. Continuing Survey of Food Intakes by Individuals (NFCS, CSFII). Report No. 86-1. *Nutrients in 3 oz. Trimmed and cooked. USDA Handbook 8-13, Rev 1986

For More Information Contact: Nebraska Beef Board, P.O. Box 248, Kearney, NE 68848-2408, (308) 236-7551.

CLARKSON MEDICAL LECTURE SERIES



NEPHROLOGY FOR THE PRACTICING PHYSICIAN

Friday, November 13, 1987

Clarkson Hospital Storz Pavilion

8 a.m. to 5 p.m.

Featured speakers include: Robert W. Schrier, M.D.
James P. Knochel, M.D.

Topics include:

New Concepts in Hypertension & Antihypertensive Therapy

Diagnosis & Management of Acute Renal Failure

Proteinuria, Hematuria and Chronic Renal Failure: Office Management

Acid-Base Disturbances: Recognition and Management

Diagnosis & Management of Common Fluid and Electrolyte Disorders

Urinary Tract Infections: Aids for Management of Difficult Problems

Workshops

8 C.M.E. and 8 A.A.F.P. credits to be awarded.

Lecture Series courtesy of
Bishop Clarkson Memorial Hospital
Medical/Dental Staff
44th and Dewey Avenue
Omaha, NE 68105-1018

For more information call 402-559-3378

ORGANIZATIONS, NATIONAL

American Academy of Family Physicians
1740 West 92nd St., Kansas City, MO 64114

American Academy of Pediatrics
James E. Strain, M.D., Executive Director
141 Northwest Point Road, P.O. Box 927
Elk Grove Village, IL 60009-0927

American Academy of Physician Assistants
F. Lynn Maly, Executive Vice President
1117 N. 19th St., 3rd Floor
Arlington, VA 22209

American Academy of Ophthalmology
Thomas P. Kearns, M.D., President
655 Beach Street, P.O. Box 7424
San Francisco, CA 94120-7424

American College of Emergency Physicians
Colin C. Rorrie, Jr., Ph.D., Executive Director
Box 619911, Dallas, TX 75261-9911

American College of Legal Medicine
Mr. Thomas W. Teal, Executive Secretary
P.O. Box 190, Maple Glen, PA 19002

American College of Obstetricians & Gynecologists
Warren H. Pearce, M.D., Executive Director
600 Maryland Avenue, S.W., Ste. 300 E
Washington, D.C. 20024

American College of Physicians
John R. Ball, M.D., J.D., F.A.C.P., Exec. Vice President
4200 Pine St., Philadelphia, PA 19104

American College of Radiology
John J. Curry, Executive Director
1981 Preston White Drive, Reston, VA 22091

American College of Surgeons
Paul A. Ebert, M.D., Director
55 East Erie St., Chicago, IL 60611

American Diabetes Association, Inc.
Robert S. Bolan, Exec. Vice President
1660 Duke Street, Alexandria, VA 22314

American Heart Association National Center
Mr. Dudley Hafner, Exec. Vice President
7320 Greenville Ave., Dallas, TX 75231

American Hospital Association
Carol M. McCarthy, Ph.D., J.D., President
840 North Lake Shore Dr., Chicago, IL 60611

American Medical Association
James H. Sammons, M.D., Exec. Vice President
535 No. Dearborn St., Chicago, IL 60610

American Society of Anesthesiologists
Mr. J. W. Andes, Executive Secretary
515 Busse Hwy., Park Ridge, IL 60068

American Society of Clinical Pathologists
Robert A. Dietrich, M.D., Chief Executive
2100 W. Harrison St., Chicago, IL 60612

American Society of Internal Medicine
Joseph F. Boyle, M.D., Exec. Vice President
1101 Vermont N.W., Ste. 500, Washington, D.C. 20005

American Urological Society
Mr. Richard J. Hannigan, Executive Secretary
1120 No. Charles St., Baltimore, MD 21201

Arthritis Foundation
Clifford M. Clarke, C.A.E., President
1314 Spring St., N.W., Atlanta, GA 30309

International College of Surgeons
F. C. Ottati, M.D., Int. Sec. General
1516 North Lake Shore Dr., Chicago, IL 60610

National Rehabilitation Association
633 S. Washington St., Alexandria, VA 22314

Radiological Society of North America
Richard E. Buenger, M.D., President
1415 W. 22nd St., Oak Brook, IL 60521

South Central Section of the American Urological Association, Inc.
Henry Kammendel, M.D., Past President
8300 Dodge St., Ste. 407, Omaha, NE 68114

ORGANIZATIONS, STATE

American Cancer Society, Nebraska Division, Inc.
Don W. McClure, Exec. Vice President
8502 West Center Rd., P.O. Box 241255, Omaha 68124-5255

American Diabetes Association - Nebraska Affiliate, Inc.
Ron Van Ryswyk, Ed.D., Executive Director
2730 South 114th St., Omaha 68144

American Heart Association, Nebraska Affiliate
Dennis N. Nissen, Executive Director
3624 Farnam St., Omaha 68131

American Lung Association of Nebraska
8901 Indian Hills Dr., Ste. 107, Omaha 68114
215 Centennial Mall South, Room 521, Lincoln 68508

American Red Cross
P.O. Box 83267
1701 "E" St., Lincoln 68501

Arthritis Foundation, Nebraska Chapter, Inc.
Ellen Wright, Exec. Director
2229 N. 91st Court, Omaha 68134

Blue Cross and Blue Shield of Nebraska
William H. Heavey, President
P.O. Box 3248, Main Station, Omaha 68180

Cerebral Palsy of Lancaster County, Inc.
Jane Hoffart, Client Services Rep.
P.O. Box 80103, Lincoln 68501

Creighton University School of Medicine
Richard O'Brien, M.D., Dean
California at 24th St., Omaha 68178

Dairy Council of Central States, Inc.
7500 Main, 103 Hillcrest Landing
Ralston 68127

Division of Rehabilitation Services
Nebraska Department of Education
6th Floor, 301 Centennial Mall South, Lincoln 68509

Division of Rehabilitation Services for the Visually Impaired
James S. Nyman, Ph.D., Director
4600 Valley Road, Lincoln 68510

Easter Seal Society of Nebraska
Mrs. Letitia K. Simmons, Executive Director
3015 North 90th St., #6, Omaha 68134

Lincoln Council on Alcoholism and Drugs
914 "L" Street, Lincoln 68508

March of Dimes - Birth Defects Foundation
1618 L Street, Lincoln 68508

MID-PLAINS POISON CONTROL CENTER
Childrens Memorial Hospital, 8301 Dodge St., Omaha 68114
(402) 390-5400 or 800-642-9999 (toll free Nebraska)

Midlands Chapter, National Multiple Sclerosis Society
538 Elkwood Mall/The Center
42nd & Center, Omaha 68105-2982

Missouri Valley Dermatologic Society
John R. Luckasen, M.D., Secretary
360 Doctors Bldg., N. Tower, Omaha 68131

Muscular Dystrophy Association
1912 No. 90th St., Lower Level, Omaha 68114

National Kidney Foundation of Nebraska
Karen Engelsman, Executive Director
2212 No. 91st Plaza, Omaha 68134
(402) 397-9234 - NE toll free 800-642-1255

National Society to Prevent Blindness, Nebraska Affiliate
120 North 69th St., Suite 203, Omaha 68132-2720

Nebraska Academy of Ophthalmology
Mylan VanNewkirk, M.D., President
329 West 40th, Scottsbluff 69361

Nebraska Academy of Otolaryngology
Michael Crawford, M.D., President
201 Ridge St., #311, Council Bluffs, IA 51501

Nebraska Allergy Society
Linda B. Ford, M.D., President
401 E. Gold Coast Rd., Papillion 68128

Nebraska Association of Nuclear Physicians, Inc.
Merton A. Quaife, M.D., President
Division of Nuclear Medicine, Dept. of Radiology
UNMC - 42nd & Dewey, Omaha 68105

Nebraska Association of Pathologists
Joseph Rapoport, M.D., President
6901 No. 72nd St., Omaha 68122

Nebraska Chapter - American Academy of Family Physicians
Paul M. Paulman, M.D., Secretary-Treasurer
Phyllis G. Hansen, Executive Secretary
River City Office Park, #202, 401 N. 117th, Omaha 68154

Nebraska Chapter - American Academy of Physician Assistants
Joe E. Jeter, PA-C, President
P.O. Box 397, North Bend 68649

Nebraska Chapter - American Academy of Pediatrics
H. J. Kuehn, M.D., Chairman
8300 Dodge St., #219, Omaha 68114

Nebraska Chapter - American College of Emergency Physicians
Richard L. Keller, M.D., President
9641 No. 29th, Omaha 68112

Nebraska Chapter - American College of Surgeons
Louis J. Gogela, M.D., Past President
2221 South 17th St., Lincoln 68502

Nebraska Chapter - American College of Physicians
Frederick F. Paustian, M.D., F.A.C.P., Governor
UNMC - 42nd & Dewey Ave., Omaha 68105

Nebraska Chapter of Myasthenia Gravis Foundation
John F. Aita, M.D., Medical Advisor
105 So. 49th St., Omaha 68132

Nebraska Cystic Fibrosis Association
Charles R. Bercaw, Executive Director
P.O. Box 31235, Omaha 68131

Nebraska Dental Association
Barry Ross, Executive Director
3120 O St., Lincoln 68510

Nebraska Dietetic Association
Linda O. Young, M.S., R.D., President
University of NE - 214 Ruth Leverton Hall, Lincoln 68503-0806

Nebraska Health Care Association
Patricia Snyder, Executive Director
3100 "O" St., Ste. 7, Lincoln 68510

Nebraska Hospital Association
Harlan Heald, President
Box 94833, 1335 L St., Lincoln 68509

Nebraska League for Nursing
Priscilla Allen, R.N., President
3800 N. 6th, #5, Beatrice 68310

Nebraska Medical Association
William L. Schellpeper, Executive Director
1512 FirstTier Bank Bldg., Lincoln 68508

Nebraska Medical Foundation
William L. Schellpeper, Executive Director
1512 FirstTier Bank Bldg., Lincoln 68508

Nebraska Nurses Association
Mary Ann Sak, Executive Director
Suite 711, Terminal Bldg., Lincoln 68508

Nebraska Orthopaedic Society
Ronald Schwab, M.D., Secretary
2300 South 13th St., Lincoln 68502

Nebraska Perinatal Organization
Sheila Ecklund, R.N.
St. Elizabeth Community Health Center, 555 So. 70th, Lincoln 68510

Nebraska Pharmacists Association
Tom R. Dolan, R.P., Executive Director
600 So. 12th, Lincoln 68508

Nebraska Psychiatric Society, District Branch of the American Psychiatric Association
Jehangir B. Bastani, M.D., President
8110 Myrtle, Lincoln 68506

Nebraska Public Health Association
President, N.P.H.A.
P.O. Box 94813, Lincoln 68509

Nebraska Radiological Society
Terrance R. Rusthoven, M.D., President
2112 Faidley, Grand Island 68801

Nebraska Rheumatism Association
Arthur L. Weaver, M.D., President
2121 South 56th St., Lincoln 68506

Nebraska Section, American College of Obstetricians & Gynecologists
Larry E. Roffman, M.D.
800 Doctors Bldg., Omaha 68131

Nebraska Society of Anesthesiologists
K. Reed Peters, M.D., President
1512 FirstTier Bank Bldg., Lincoln 68508

Nebraska Society of Internal Medicine
Vernon Garwood, M.D., President
120 Wedgewood Ave., Suite A, Lincoln 68510

Nebraska Society of Medical Assistants, Inc., an Affiliate of the American Association of Medical Assistants
Patty Hafer, CMA, President
Box 184, Sutherland 69165

Nebraska Society for Respiratory Therapy
Charlotte Pascoe, R.R.T., President
Southeast Community College, Lincoln 68505

Nebraska State Department of Health
Gregg Wright, M.D., Director of Health
301 Centennial Mall South, P.O. Box 95007, Lincoln 68509

Nebraska State Obstetric and Gynecology Society
Dennis D. Beavers, M.D., Secretary-Treasurer
720 No. 87th St., Omaha 68114

Nebraska Stroke Foundation
Karyl Newman, President
P.O. Box 67004, Lincoln 68506

Nebraska Urological Association
Alan H. Domina, M.D., President
4740 A Street, Lincoln 68510

Nebraska Veterinary Medical Association
Don Ellerbee, Executive Director
209 West 9th St., Hastings 68901

Omaha Mid-West Clinical Society
Ms. Lorraine E. Seibel, Executive Secretary
7363 Pacific St., #205-B, Omaha 68114

Physician Referral Program, Nebraska Department of Health
3rd Floor, State Office Building, 301 Centennial Mall So., Lincoln 68509

University of Nebraska Medical Center
Charles E. Andrews, M.D., Chancellor
42nd & Dewey Ave., Omaha 68105

The Nebraska Medical Journal

VOL. 72, NO. 11

NOVEMBER 1987

EDITOR —

ALAN D. FORKER, M.D.
5505 Ellendale Road,
Lincoln, NE 68510

Associate Editors:

Deepak M. Gangahar, M.D., Lincoln
Charles S. Wilson, M.D., Lincoln

Editorial Board:

James O. Armitage, M.D., Omaha
Rodney S.W. Basler, M.D., Lincoln
Jehangir B. Bastani, M.D., Lincoln
John H. Casey, M.D., Lincoln
Paul E. Collicott, M.D., Lincoln
John F. Connolly, M.D., Omaha
Douglass Decker, Jr., M.D., Lincoln
Robert W. Gillespie, M.D., Lincoln
Stephen R. Grenier, M.D., Lincoln
Bruce D. Gutnik, M.D., Omaha
Roger Harned, M.D., Omaha
Edward A. Holyoke, Jr., M.D., Ogallala
Sushil S. Lacy, M.D., Lincoln
Hal K. Mardis, M.D., Omaha
Gilles R. G. Monif, M.D., Omaha
Walter J. O'Donohue, M.D., Omaha
William F. Rayburn, M.D., Omaha
John L. Reed, M.D., Lincoln
Jerald R. Schenken, M.D., Omaha
Kenton L. Shaffer, M.D., Kearney
Harlan C. Shriner, Jr., M.D., Lincoln
Patricia Cole Stivins, M.D., Lincoln
Harold W. Thaut, M.D., Beatrice
Jon S. Thompson, M.D., Omaha
William L. Vosik, M.D., Kearney
Arthur Weaver, M.D., Lincoln



SUBSCRIPTION RATE

\$18.00 Per Year U.S.
\$18.00 Per Year Foreign Country
Single Copies \$1.50 Each

Copyright® 1987 Nebraska Medical Association. Information concerning reprints of the articles in this Journal and concerning obtaining permission for the reproduction of any portion of this Journal may be obtained from the Editor.

The Nebraska Medical Journal does not assume responsibility for statements made or opinions expressed by the authors. Products and services advertised are neither endorsed nor warranted by the Nebraska Medical Association. The Nebraska Medical Journal reserves the right to accept or reject advertising copy.

Published monthly and Second-Class Postage paid at Lincoln, Nebraska and at additional mailing offices (ISSN 0091-6730)

Address all correspondence relating to subscriptions, advertising or address changes to William L. Schellpeper, Business Manager, 1512 First Tier Bank Building, Lincoln, Nebraska 68508. Phone (402) 474-4472.

EDITORIAL —

- Time to Change 361
Alan D. Forker, M.D.

ORIGINAL ARTICLES —

- High Frequency Ventilation in Neonatal
Pulmonary Interstitial Emphysema 362
Brian R. Wood, M.D.
Larry D. Eggert, M.D.
David L. Bolam, M.D.
Robert M. Nelson, Jr., M.D.

- The Role of Radiotherapy in the Treatment of
Biliary Tract Neoplasms 367
Albert R. Frank, M.D.
D. R. Owen, M.D.

- Fracture of the Month —
Avulsion of the Patella with Quadriceps Rupture -
A Frequently Missed Diagnosis 373
John F. Connolly, M.D.
Lynn A. Crosby, M.D.

FEATURES —

- President's Page 376
The Auxiliary 378
Creighton University Medical Center News 379
Coming Meetings 381
Picture Galley 383

Since 1925

Nebraska's Leading Physicians and Surgical Supply House

Phone 474-3222



**DONLEY MEDICAL
SUPPLY COMPANY**

P.O. Box 83108, Lincoln, NE 68501
AUTHORIZED CONTRACT AGENT

REPRINTS

OF YOUR

Technical Articles

Are a direct presentation of research
and a valuable supplement
to any doctor's library.



It costs very little
to run reprints —
write us for prices

Norfolk Printing Co., Inc.

118 North Fifth
NORFOLK, NEBRASKA 68701

Letterheads - Statements
Envelopes - Office Forms
Quality Printing at the Right Price

ADVICE TO AUTHORS

Manuscripts should be submitted in duplicate to the Editor at the following address: Alan D. Forker, M.D., 5505 Ellendale Road, Lincoln, Nebraska 68510. The manuscript should be typewritten, double-spaced, on 8½ x 11 in. paper, with generous margins on each page. Number all pages in the right upper corner with the author's surname.

Review articles will be considered, and should generally be limited to less than 4,000 words and approximately 30 references.

Manuscripts describing original clinical or laboratory research should be limited to 2,000 words and approximately 20 references.

Acknowledgements must be given when material from other publications is included. Provide names of authors, title of article, title of journal or book, volume number, pages, month and year, and publisher's permission to reprint.

Always send a covering letter or letter of transmittal with each manuscript, and refer to the manuscript by its title, in the letter and all correspondence. Do not send a manuscript that was published elsewhere.

Title page: each manuscript should have a title page, including the full name, academic degree, and hospital or university affiliation of each author. A name and address for reprint requests should be included on the title page, including street address, city, state, and zip code.

Summary for article: all major scientific articles should be accompanied by a summary at the end of the article, summarizing the key information and recommendations presented.

References: should be listed in the order in which they appear in the article and should be typed double-spaced. Authors are responsible for the completeness and accuracy of all cited references. Journal references should include authors' names and initials, title of article, abbreviated name of Journal (as listed in Index Medicus), volume number, inclusive pages, and year of publication. References to books should include authors, title, location and name of publisher, year of publication, edition, and page numbers.

Tables and illustrations: should be typed double-spaced on separate sheets of 8½ x 11 in. paper. Each Table should have a title. Illustrations should be prepared professionally and submitted as high-quality, glossy, unmounted black-and-white photographic prints, at least 5 x 7 in. Do not send original artwork. Each illustration should be consecutively numbered and cited in the text. Each photograph should have a gummed label on the back containing the figure number, name of senior author and an arrow indicating top of figure. Legends should be typed double-space for each illustration. Permission to reproduce a picture of a patient is needed, if such a picture is included.

Letters-to-the-Editor: letters are encouraged by all readers and will be published as space permits and at the discretion of the Editor. All letters should be accompanied by the notation: For publication. Galley proofs generally will not be returned to the authors pre-publication.

Manuscripts will be published in the order in which they are received, particularly in the order in which galley proofs are returned from the authors. The Editor of this Journal assumes no responsibility for opinions and claims expressed in an article published in this Journal.

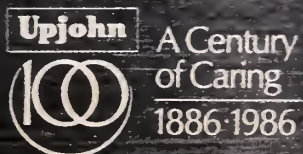
Reprints should be ordered from the printer, Norfolk Printing Company, Inc., P.O. Box 278, Norfolk, Nebraska 68701.

Motrin[®] 800 TABLETS mg

ibuprofen



Extra strength
Convenience
Economy



ANNOUNCING NEW

Keflet® TABLETS cephalexin

All the advantages of cephalalexin in a convenient tablet form

- Backed by over 15 years of clinical experience
- Smaller tablet is specially shaped and coated for easier swallowing
- May enhance patient compliance, particularly among the elderly
- Tablet dosage form may be appreciated by patients of all ages

NEW Keflet Tablets are available as:



Keflet is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-sensitive patients.

Brief Summary. Consult the package literature for prescribing information. Indications and Usage: Keflet® Tablets (cephalexin, Dista) are indicated for the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Respiratory tract infections caused by *Streptococcus pneumoniae* and group A β -hemolytic streptococci (Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. Keflet is generally effective in the eradication of streptococci from the nasopharynx; however, substantial data establishing the efficacy of Keflet in the subsequent prevention of rheumatic fever are not available at present.)

Otitis media due to *S. pneumoniae*, *Haemophilus influenzae*, staphylococci, streptococci, and *Neisseria catarrhalis*

Skin and skin structure infections caused by staphylococci and/or streptococci

Bone infections caused by staphylococci and/or *Proteus mirabilis*

Genitourinary tract infections, including acute prostatitis, caused by

Escherichia coli, *P. mirabilis*, and *Klebsiella sp.*

Note:—Culture and susceptibility tests should be initiated prior to and during therapy. Renal function studies should be performed when indicated.

Contraindication: Keflet is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: BEFORE CEPHALEXIN THERAPY IS INSTITUTED, CAREFUL INQUIRY SHOULD BE MADE CONCERNING PREVIOUS HYPERSENSITIVITY REACTIONS TO CEPHALOSPORINS AND PENICILLIN. CEPHALOSPORIN C DERIVATIVES SHOULD BE GIVEN CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS.

SERIOUS ACUTE HYPERSENSITIVITY REACTIONS MAY REQUIRE EPINEPHRINE AND OTHER EMERGENCY MEASURES.

There is some clinical and laboratory evidence of partial cross-allergenicity of the penicillins and the cephalosporins. Patients have been reported to have had severe reactions (including anaphylaxis) to both drugs.

Any patient who has demonstrated some form of allergy, particularly to drugs, should receive antibiotics cautiously. No exception should be made with regard to Keflet.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins); therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening.

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis.

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile*. Other causes of colitis should be ruled out.

Usage in Pregnancy:—Safety of this product for use during pregnancy has not been established.

Precautions: General:—Patients should be followed carefully so that any side effects or unusual manifestations of drug idiosyncrasy may be detected. If an allergic reaction to Keflet occurs, the drug should be discontinued and the patient treated with the usual agents (eg, epinephrine or other pressor amines, antihistamines, or corticosteroids).

Prolonged use of Keflet may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Keflet should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

Indicated surgical procedures should be performed in conjunction with antibiotic therapy.

As a result of administration of Keflet, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy—Pregnancy Category B:—The daily oral administration of cephalalexin to rats in doses of 250 or 500 mg/kg prior to and during pregnancy, or to rats and mice during the period of organogenesis only, had no adverse effect on fertility, fetal viability, fetal weight, or litter size. Note that the safety of cephalalexin during pregnancy in humans has not been established.

Cephalalexin showed no enhanced toxicity in weanling and newborn rats as compared with adult animals. Nevertheless, because the studies in humans cannot rule out the possibility of harm, Keflet should be used during pregnancy only if clearly needed.

Nursing Mothers:—The excretion of cephalalexin in the milk increased up to 4 hours after a 500-mg dose; the drug reached a maximum level of 4 μ g/mL, then decreased gradually, and had disappeared 8 hours after administration. Caution should be exercised when Keflet is administered to a nursing woman.

Adverse Reactions: Gastrointestinal:—Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely. The most frequent side effect has been diarrhea. It was very rarely severe enough to warrant cessation of therapy. Dyspepsia and abdominal pain have also occurred. As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.

Hypersensitivity:—Allergic reactions in the form of rash, urticaria, angioedema, and, rarely, erythema multiforme, Stevens-Johnson Syndrome, or toxic epidermal necrolysis have been observed. These reactions usually subsided upon discontinuation of the drug. Anaphylaxis has also been reported.

Other reactions have included genital and anal pruritus, genital moniliasis, vaginitis and vaginal discharge, dizziness, fatigue, and headache. Reversible interstitial nephritis has been reported rarely. Eosinophilia, neutropenia, thrombocytopenia, and slight elevations in SGOT and SGPT have been reported.

PV 2211 DPP

1117861

Additional information available to the profession on request from



Dista Products Company
Division of Eli Lilly and Company
Indianapolis, Indiana 46285
Mfd by Eli Lilly Industries, Inc.
Carolina, Puerto Rico 00630



"Living in the city
is lonely enough...
with herpes it's like
solitary confinement."

ZOVIRAX[®]
(acyclovir)
CAPSULES

**Prevent genital herpes
recurrences
month after month with
daily therapy.**

(In controlled studies, recurrences were
totally prevented for 4 to 6 months in up to
75% of patients.)

ZOVIRAX® (acyclovir) CAPSULES

**Help free your
patients from
recurrences.**

Daily therapy

Coping with genital herpes is rarely easy. For some, the worst part is the pain and discomfort of frequent attacks — month after month, year after year. For others, the emotional burden presents a more difficult problem, leading to social isolation, anxiety, and diminished self-esteem.

Prevent or reduce recurrences

Although your patients have to live with herpes, they shouldn't have to suffer. Daily therapy with ZOVIRAX CAPSULES can help free them from the cycle of recurrent genital herpes. For many, one capsule three times a day can suppress recurrences completely while on therapy.

Generally well tolerated

Daily therapy with ZOVIRAX CAPSULES is generally well tolerated. The most frequent adverse reactions reported during clinical trials were headache, diarrhea, nausea/vomiting, vertigo, and arthralgia.

The physical and emotional difficulties posed by genital herpes are unique for each patient. The frequency and severity of recurrent episodes, as well as the emotional impact of the disease, should be considered when selecting daily therapy with ZOVIRAX CAPSULES.

*Please see brief summary of
prescribing information on next page.*



Prevent recurrences 1 month after month* **ZOVIRAX®** (acyclovir) **CAPSULES**

(Summary)

INDICATIONS AND USAGE: Zovirax Capsules are indicated for the treatment of initial episodes of genital herpes, the management of recurrent episodes of genital herpes in certain patients. The severity of disease is variable depending on the immune status of the patient, the frequency and duration of episodes, and the degree of local or systemic involvement. These factors should determine patient management, which may include symptomatic support and counseling only, or institution of specific therapy. The physical, emotional and psycho-social difficulties posed by genital infections as well as the degree of debilitation, particularly in immunocompromised patients, are unique for each patient, and the physician should determine the appropriate management. Zovirax Capsules are not appropriate in treating all genital herpes infections. The following considerations may be useful in weighing the benefit/risks in specific disease categories:

Initial Episodes (primary and nonprimary infection): commonly known as initial genital herpes; double-blind, placebo-controlled studies have demonstrated that orally administered Zovirax significantly reduced the duration of acute infection (time to resolution of virus in lesions by tissue culture) and healing. The duration of pain and new lesion activity was decreased in some patient groups. Promptness of initiation of therapy and/or the patient's prior exposure to Herpes simplex virus influence the degree of benefit from therapy. Patients with mild disease may derive less benefit from therapy than those with more severe episodes. In patients with extremely severe episodes, in which prostatic, central nervous system involvement, urinary retention or inability to take oral medication require hospitalization and more aggressive management, therapy may be best initiated with intravenous Zovirax.

Recurrent Episodes: double-blind, placebo-controlled studies in patients with frequent recurrences (6 or more lesions per year) have shown that Zovirax Capsules for 4 to 6 months prevented or reduced the frequency and/or severity of recurrences in greater than 50% of patients. Clinical recurrences were reduced in 40 to 75% of patients. Some patients experienced increased severity of the first episode after cessation of therapy; the severity of subsequent episodes and the effect on the natural history of the disease are still under study. The safety and efficacy of orally administered Zovirax in the suppression of frequent episodes of genital herpes have been established only for up to 6 months. Chronic suppressive therapy is most appropriate when, in the judgement of the physician, the benefits of such a regimen outweigh the potential adverse effects. In general, Zovirax Capsules should not be used for the suppression of recurrent disease in mildly affected patients. Unanswered questions concerning the relevance of *in vitro* mutagenicity studies and productive toxicity studies in animals given high doses of acyclovir for short periods (see Carcinogenesis, Mutagenesis, Impairment of Fertility) should be borne in mind when designing clinical management for individual patients. Resolution of these issues with patients will provide the opportunity to weigh the potential for long-term benefit against the severity of their disease. Thus, therapy should be considered only for appropriate patients and only for six months until the results of ongoing studies allow a more precise determination of the benefit/risk assessment of pro-therapy. Limited studies have shown that there are no patients for whom intermittent short-term treatment of recurrent episodes is effective. This therapy may be more appropriate than a suppressive regimen in patients with infrequent recurrences.

Immunocompromised patients with recurrent herpes infections can be treated with either intermittent or chronic suppressive therapy. Clinically significant resistance, although rare, is more likely to be seen with prolonged or repeated therapy in severely immunocompromised patients with active lesions.

CONTRAINDICATIONS: Zovirax Capsules are contraindicated for patients who develop hypersensitivity or intolerance to the components of the formulation.

WARNINGS: Zovirax Capsules are intended for oral ingestion only.

PRECAUTIONS: General: Zovirax has caused decreased spermatogenesis at high doses in some animals and mutagenesis in some acute studies at high concentrations of drug (see PRECAUTIONS—Carcinogenesis, Mutagenesis, Impairment of Fertility). The recommended dosage and length of treatment should not be exceeded (see DOSAGE AND ADMINISTRATION).

Exposure of Herpes simplex isolates to acyclovir *in vitro* can lead to the emergence of less sensitive viruses. The possibility of the appearance of less sensitive viruses in man must be borne in mind when treating patients. The relationship between the *in vitro* sensitivity of Herpes simplex virus to acyclovir and clinical response to therapy has yet to be established.

Because of the possibility that less sensitive virus may be selected in patients who are receiving acyclovir, all patients should be advised to take particular care to avoid potential transmission of virus if active lesions are present while they are on therapy. In severely immunocompromised patients, the physician should be aware that prolonged or repeated courses of acyclovir may result in selection of resistant viruses which may not fully respond to continued acyclovir therapy.

Drug Interactions: Co-administration of probenecid with intravenous acyclovir has been shown to increase the mean half-life and the area under the concentration-time curve. Urinary excretion and renal clearance were correspondingly reduced.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Acyclovir was tested in lifetime bioassays in rats and mice at single daily doses of 50, 150 and 450 mg/kg given by gavage. There was no statistically significant difference in the incidence of tumors between treated and control animals, nor did acyclovir shorten the latency of tumors. In 2 *in vitro* cell transformation assays, used to provide preliminary assessment of potential oncogenicity in advance of these more definitive life-time bioassays in rodents, conflicting results were obtained. Acyclovir was positive at the highest dose used in one system and the resulting morphologically transformed cells formed tumors when inoculated into immunosuppressed, syngeneic, weanling mice. Acyclovir was negative in another transformation system considered less sensitive.

In acute studies, there was an increase, not statistically significant, in the incidence of chromosomal damage at maximum tolerated parenteral doses of 100 mg/kg acyclovir in rats but not Chinese hamsters; higher doses of 500 and 1000 mg/kg were clastogenic in Chinese hamsters. In addition, no activity was found after 5 days dosing in a dominant lethal study in mice. In 6 of 11 microbial and mammalian cell assays, no evidence of mutagenicity was observed. At 3 loci in a Chinese hamster ovary cell line, the results were inconclusive. In 2 mammalian cell assays (human lymphocytes and L5178Y mouse lymphoma cells *in vitro*), positive responses for mutagenicity and chromosomal damage occurred, but only at concentrations at least 400 times the acyclovir plasma levels achieved in man.

Acyclovir has not been shown to impair fertility or reproduction in mice (450 mg/kg/day, p.o.) or in rats (25 mg/kg/day, s.c.). At 50 mg/kg/day s.c. in the rat, there was a statistically significant increase in post-implantation loss, but no concomitant decrease in litter size. In female rabbits treated subcutaneously with acyclovir subsequent to mating, there was a statistically significant decrease in implantation efficiency but no concomitant decrease in litter size at a dose of 50 mg/kg/day. No effect upon implantation efficiency was observed when the same dose was administered intravenously. In a rat peri- and postnatal study at 50 mg/kg/day s.c., there was a statistically significant decrease in the group mean numbers of corpora lutea, total implantation sites and live fetuses in the F₁ generation. Although not statistically significant, there was also a dose related decrease in group mean numbers of live fetuses and implantation sites at 12.5 mg/kg/day and 25 mg/kg/day, s.c. The intravenous administration of 100 mg/kg/day, a dose known to cause obstructive nephropathy in rabbits, caused a significant increase in fetal resorptions and a corresponding decrease in litter size. However, at a

maximum tolerated intravenous dose of 50 mg/kg/day in rabbits, there were no drug-related reproductive effects.

Intraperitoneal doses of 320 or 80 mg/kg/day acyclovir given to rats for 1 and 6 months, respectively, caused testicular atrophy. Testicular atrophy was persistent through the 4-week postdose recovery phase after 320 mg/kg/day; some evidence of recovery of sperm production was evident 30 days post-dose. Intravenous doses of 100 and 200 mg/kg/day acyclovir given to dogs for 31 days caused aspermatogenesis. Testicles were normal in dogs given 50 mg/kg/day, i.v. for one month.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Acyclovir was not teratogenic in the mouse (450 mg/kg/day, p.o.), rat (50 mg/kg/day, s.c.) or rabbit (50 mg/kg/day, s.c. and i.v.). There are no adequate and well-controlled studies in pregnant women. Acyclovir should not be used during pregnancy unless the potential benefit justifies the potential risk to the fetus. Although acyclovir was not teratogenic in animal studies, the drug's potential for causing chromosome breaks at high concentration should be taken into consideration in making this determination.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Zovirax is administered to a nursing woman. In nursing mothers, consideration should be given to not using acyclovir treatment or discontinuing breastfeeding.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS—Short-Term Administration: The most frequent adverse reactions reported during clinical trials were nausea and/or vomiting in 8 of 298 patient treatments (2.7%) and headache in 2 of 298 (0.6%). Less frequent adverse reactions, each of which occurred in 1 of 298 patient treatments (0.3%), included diarrhea, dizziness, anorexia, fatigue, edema, skin rash, leg pain, inguinal adenopathy, medication taste and sore throat.

Long-Term Administration: The most frequent adverse reactions reported in studies of daily therapy for 3 to 6 months were headache in 33 of 251 patients (13.1%), diarrhea in 22 of 251 (8.8%), nausea and/or vomiting in 20 of 251 (8.0%), vertigo in 9 of 251 (3.6%), and arthralgia in 9 of 251 (3.6%). Less frequent adverse reactions, each of which occurred in less than 3% of the 251 patients (see number of patients in parentheses), included skin rash (7), insomnia (4), fatigue (7), fever (4), palpitations (1), sore throat (2), superficial thrombophlebitis (1), muscle cramps (2), paronychia (1), menstrual abnormality (4), acne (3), lymphadenopathy (2), irritability (1), accelerated hair loss (1), and depression (1).

DOSAGE AND ADMINISTRATION: Treatment of initial genital herpes: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 10 days (total 50 capsules).

Chronic suppressive therapy for recurrent disease: One 200 mg capsule 3 times daily for up to 6 months. Some patients may require more drug, up to one 200 mg capsule 5 times daily for up to 6 months.

Intermittent Therapy: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 5 days (total 25 capsules). Therapy should be initiated at the earliest sign or symptom (prodrome) of recurrence.

Patients With Acute or Chronic Renal Impairment: One 200 mg capsule every 12 hours is recommended for patients with creatinine clearance ≤ 10 ml/min/1.73 m².

HOW SUPPLIED: Zovirax Capsules (blue, opaque) containing 200 mg acyclovir and printed with "Wellcome ZOVIRAX 200". Bottles of 100 (NDC-0081-0991-55) and unit dose pack of 100 (NDC-0081-0991-56).

Store at 15°-30°C (59°-86°F) and protect from light.

*In controlled studies, recurrences were totally prevented for 4 to 6 months in up to 75% of patients.

Burroughs Wellcome Co., Research Triangle Park, North Carolina 27709



BURROUGHS-WELLCOME CO.

Copyright © 1986 Burroughs Wellcome Co. All rights reserved. 86-ZOV-5

The complete journal for family practice physicians

- Reaches 79,000 family physicians monthly
- Presents the most commonly seen patient problems in family practice
- Written by physicians for physicians
- The most current clinical updates in:
 - Cardiology
 - Diabetes
 - Pediatrics
 - Ob/Gyn
 - Psychiatry
 - Gastroenterology
- Provides 20 hours of CME Category 1 Credit

PRACTICAL • CLINICAL • EDUCATIONAL • CURRENT

**FP
R**

Family Practice Recertification®

JULY 1987 VOL 9 NO 7

Pain pathways page 63

CLINICAL ARTICLES

- Endometrial Cancer: Causes and Patient Evaluation
- Pain Management in Primary Care
 - Controlling Side Effects of Antipsychotic Drugs, Part 2: Extrapyramidal Symptoms
- Osteoporosis, Part 2: Prevention and Treatment

KEEPING CURRENT

- | | |
|--|---|
| Assessing Impairment of Elderly Hospitalized Patients | Withdrawing Patients From Antihypertensive Drug Therapy |
| Routine Radiological Testing In Respiratory Illness | Cesarean Section and Infant Survival |
| Using Ultrasound to Detect Hip Abnormalities | Preventing Neonatal Group B Streptococcal Disease |
| Diagnosing Bone Infection Under Pressure Sores | Diagnosing Acute Scrotal Pain |
| Slowing Progression of Diabetic Nephropathy | Urinary Tract Infections Among Cocircumcised Infants |
| Behavioral Disorders Among Children of Alcoholics: Fathers | Colonoscopy: Detecting Recurrent Colorectal Cancer |
| Catheter-Related Septic Central Venous Thrombosis | Surgical Management of Chronic Intestinal Ischemia |
| | Preventing Travelers' Diarrhea |

SPECIAL FEATURE

Willingway: A Fellowship in Alcoholism and Drug Addiction

COUNCILOR DISTRICTS AND COUNTIES

First District: Councilor: Richard B. Svehla, Omaha. Counties: Douglas, Sarpy.

Second District: Councilor: Sushil S. Lacy, Lincoln. Counties: Cass, Lancaster, Otoe.

Third District: Councilor: C. T. Frerichs, Beatrice. Counties: Gage, Johnson, Nemaha, Pawnee, Richardson.

Fourth District: Councilor: Roger Massie, Plainview. Counties: Antelope, Cedar, Cuming, Dakota, Dixon, Knox, Madison, Pierce, Stanton, Thurston, Wayne.

Fifth District: Councilor: William Chleborad, M.D., Fremont. Counties: Boone, Burr, Colfax, Dodge, Merrick, Nance, Platte, Washington.

Sixth District: Councilor: Robert Herpolsheimer, M.D., Seward. Counties: Butler, Hamilton, Polk, Saunders, Seward, York.

Seventh District: Councilor: Robert Quick, M.D., Crete. Counties: Clay, Fillmore, Jefferson, Nuckolls, Saline, Thayer.

Eighth District: Councilor: Floyd H. Shiffriller, Ainsworth. Counties: Boyd, Brown, Cherry, Holt, Keya Paha, Rock, Sheridan.

Ninth District: Councilor: Stanley Nabity, Grand Island. Counties: Blaine, Buffalo, Custer, Dawson, Garfield, Grant, Greeley, Hall, Hooker, Howard, Loup, Sherman, Thomas, Valley, Wheeler.

Tenth District: Councilor: David R. Little, M.D., Hastings. Counties: Adams, Chase, Dundee, Franklin, Frontier, Furnas, Gosper, Harlan, Hayes, Hitchcock, Kearney, Phelps, Red Willow, Webster.

Eleventh District: Councilor: Donald E. Fischer, North Platte. Counties: Arthur, Deuel, Garden, Keith, Lincoln, Logan, McPherson, Perkins.

Twelfth District: Councilor: Donald E. Wilkinson, Alliance. Counties: Banner, Box Butte, Cheyenne, Dawes, Kimball, Morrill, Scotts Bluff, Sioux.

COUNTY

Adams.....

Antelope-Pierce.....

Box Butte.....

Buffalo.....

Butler.....

Cass.....

Cheyenne-Kimball-Deuel.....

Cuming.....

Custer.....

Dawson.....

Dodge.....

Five.....

Four.....

Gage.....

Hall.....

Hamilton.....

Holt & Northwest.....

Jefferson.....

Knox.....

Lancaster.....

Lincoln.....

Madison.....

Metropolitan Omaha.....

Northeast.....

Northwest.....

Otoe.....

Keith-Perkins-Chase.....

Platte-Loup Valley.....

Saline.....

Sarpy.....

Saunders.....

Scotts Bluff.....

Seward.....

South Central.....

Southeast Nebr.....

Southwest Nebr.....

Washington-Burt.....

York.....

PRESIDENT

Kevin Wycoff, Hastings.....

Kenneth Peters, Plainview.....

Wendell Fairbanks, Alliance.....

John Schulte, Kearney.....

Victor Thoendel, David City.....

R. R. Anderson, Nehawka.....

James Thayer, Sidney.....

Loren Jacobsen, Broken Bow.....

Rod Koerber, Fremont.....

Willis L. Wiseman, Wayne.....

Tom Martin, Ord.....

Alan Langvardt, Beatrice.....

L. W. Hake, Grand Island.....

M. D. Jobman, Aurora.....

Melvin Campbell, Ainsworth.....

Gordon O. Johnson, Fairbury.....

D. M. Laflin, Creighton.....

C. L. Barton, Lincoln.....

Dell Shepherd, North Platte.....

Otto Wullschlegel, Norfolk.....

Jerald R. Schenken, Omaha.....

Robert Benthack, Wayne.....

Joel Hutchins, Gordon.....

Dean R. Thomson, Nebraska City.....

Berl W. Spencer, Ogallala.....

Arthur Liebenritt, Columbus.....

Fred Gawecki, Papillion.....

I. M. French, Wahoo.....

Lowell Stratton, Mitchell.....

Paul Plessman, Seward.....

Jeff Hotlis, Geneva.....

Gary Ensz, Auburn.....

David A. Allerheiligen, McCook.....

H. Neal Sievers, Blair.....

James D. Bell, York.....

SECRETARY-TREASURER

Richard French, Hastings.....

David Johnson, Osmond.....

Chris Wilkinson, Alliance.....

Gerry Jensen, Kearney.....

Jack Kaufmann, David City.....

Glen K. Knosp, Elmwood.....

Clinton Dorwart, Sidney.....

Gordon Moshman, West Point.....

N. Leon Books, Broken Bow.....

Rodney Sitorius, Cozad.....

W. B. Eaton, Fremont.....

Robert Benthack, Wayne.....

Otis Miller, Ord.....

Louis J. Gogela, Jr., Beatrice.....

Gordon Francis, Grand Island.....

G. D. Penner, Aurora.....

John Bryd, Valentine.....

R. A. Blatny, Fairbury.....

D. J. Nagengast, Bloomfield.....

M. A. Breiner, Lincoln.....

Timothy O'Holleran, North Platte.....

C. Robert Adams, Norfolk.....

F. F. Paustian, Omaha.....

C. Robert Adams, Norfolk.....

R. H. Rasmussen, Chadron.....

Paul R. Madison, Nebraska City.....

E. A. Holyoke, Ogallala.....

Dwight Rickard, Columbus.....

Robert E. Tuma, Crete.....

Fred Schwartz, Papillion.....

John E. Hansen, Jr., Wahoo.....

Vonn Roherts, Scottsbluff.....

Van Vahle, Seward.....

Chas. F. Ashby, Geneva.....

George Voigtlander, Pawnee City.....

E. C. Beyer, McCook.....

K. C. Bagby, Blair.....

Darroll J. Loschen, York.....

AMA News Notes

AMA: PART B INCREASES IN LINE

There is nothing extraordinary about the 19.9% rise in Medicare Part B expenditures that occurred during the past year, the AMA told the House Ways and Means Committee on September 30.

That assessment was made by James S. Todd, M.D., AMA's Senior Deputy Executive Vice President, at hearings that were called to determine why a 38.5% increase in Medicare Part B premiums is projected for 1988. The hearings were promptly scheduled by the Ways and Means Committee after the Dept. of Health and Human Services announced at mid-month the news of the anticipated steep hike in Part B premiums.

Dr. Todd pointed out that the government's Medicare Part B outlays have increased annually by an average of 17.2% for the past 10 years and that they have risen by 18% in 10 of the past 14 years.

Expenditures for July, 1986-June 30, 1987 period exceeded that level primarily because of continued greater utilization of the Medicare program by beneficiaries; a new policy accelerating claims processing; and a 6.8% increase in "reasonable charges" that followed professionally-welcomed Congressional action ending the Medicare fee freeze that had been in effect since October of 1984. This level of expenditure increase should not be unexpected or seen as unrealistic," Dr. Todd said.

Dr. Todd said the expected \$6.90 increase in Medicare Part B Premiums is readily explained by several special factors. Based on the Medicare law, premiums would be set at about \$300 annually.

In his straightforward testimony Dr. Todd tactfully avoided any reference to the big news splash that accompanied the politically-sensitive HHS announcement and placed physicians in a bad light because of some implications that they are abusing the Medicare system. That publicity infuriated physicians across the country because such implications were completely without factual foundation.

(continued on page 14-A)

Creighton University Medical Center
announces a REVIEW COURSE in

UNDERSTANDING AIDS

At The Red Lion Inn
Omaha, Nebraska

December 11-12, 1987

COURSE

CO-DIRECTORS:

Washington C. Hill, M.D.
Associate Professor of Obstetrics and Gynecology
Director, Maternal-Fetal Medicine
and The Perinatal Center

Gilles R.G. Monif, M.D.
Professor of Obstetrics and Gynecology
Director, Division of Infectious Diseases

FACULTY:

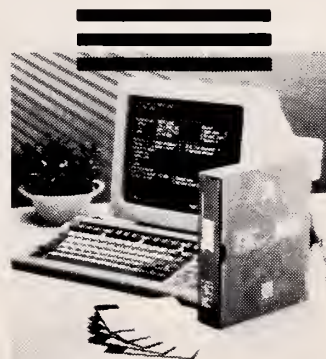
Mary Alderson, R.N.
Robert Fagnant, M.D.
Rita Fahrner, R.N.
Washington C. Hill, M.D.
James D. Landmark, M.D.
Ruthanne Marcus, M.P.H.
Howard Minkoff, M.D.
Gilles R.G. Monif, M.D.
Richard L. O'Brien, M.D.
Laurel Preheim, M.D.
Martha Rogers, M.D.

Richard Shugrue, J.D.
Paul Stoesz, M.D.
Laverne Wintermeyer, M.D.



AMA CATEGORY I
CREDITS AND ACOG
COGNATES AVAILABLE

For further information:
Office of Continuing Education
Creighton University
School of Medicine
Omaha, NE 68178
Call: 1-800-228-7212
ext. 2550



Physicians who have
thoroughly investigated their
choices are selecting MDX*
medical data software.

MDX

*MDX is a trademark of Calyx, Inc.

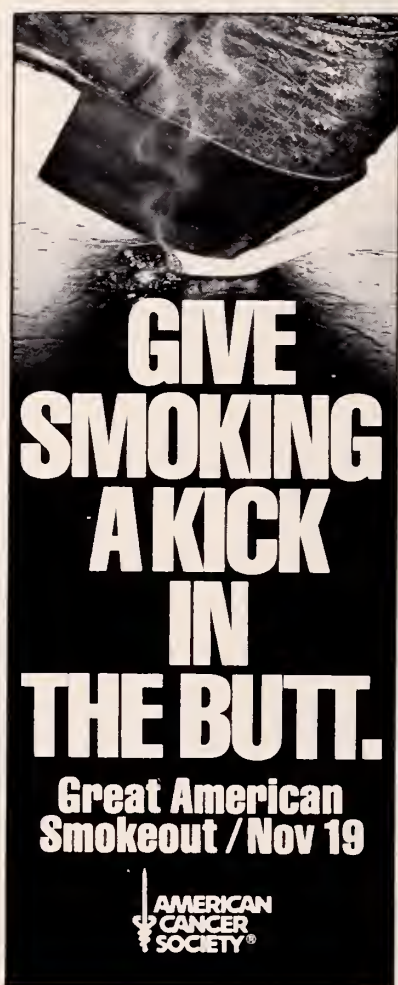
Call us about the multi-user,
multi-tasking MDX system.
We will send you a video tape
presentation.



INFO-BUILDERS, INC.

402/331-2546
11203 JOHN GALT BOULEVARD
OMAHA, NEBRASKA 68137

Providing complete installation, training and
support services.



AMA News Notes

(continued from page 13-A)

Dr. Todd said the government's increasing Medicare Part B outlays reflect expanded access to and utilization of services by Medicare beneficiaries.

"In fact," he said, "physicians have provided this expanded level of care with virtually no increase in program reimbursement between 1983 and 1986. The increase in program expenditures illustrates that improvements in beneficiary access are not without cost."

A substantial percentage of the projected increase in Medicare Part B premiums is directly attributable to the lack of any increase in 1986 premiums and the fact that the Administration opted not to impose the full increase in premiums that was justified this

(continued on page 386)

CARAFATE[®]
(sucralfate)

BRIEF SUMMARY

CONTRAINDICATIONS

There are no known contraindications to the use of sucralfate.

PRECAUTIONS

Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that the simultaneous administration of CARAFATE with tetracycline, phenytoin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. The clinical significance of these animal studies is yet to be defined.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No evidence of drug-related tumorigenicity was found in chronic oral toxicity studies of 24 months' duration conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies have not been conducted.

Pregnancy: Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients, adverse effects were reported in 121 (4.7%). Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

DOSAGE AND ADMINISTRATION

The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

HOW SUPPLIED

CARAFATE (sucralfate) 1-gm pink tablets are supplied in bottles of 100 and in Unit Dose Identification Paks of 100. The tablets are embossed with MARION/1712.

Issued 3/84

References:

1. Grossman MI: *Scand J Gastroenterol* 58 (suppl 15):7-16, 1980.
2. Marks IN, in Hellemans J, Vantrappen G (eds): *Gastrointestinal Tract Disorders in the Elderly* Edinburgh, Churchill Livingstone, 70-81, 1984.
3. Krentz K, Jablonowski H, in Hellemans J, Vantrappen G (eds): *Gastrointestinal Tract Disorders in the Elderly* Edinburgh, Churchill Livingstone, 62-69, 1984.

Another patient benefit product from
PHARMACEUTICAL DIVISION
MARION
LABORATORIES, INC.
KANSAS CITY, MO 64137

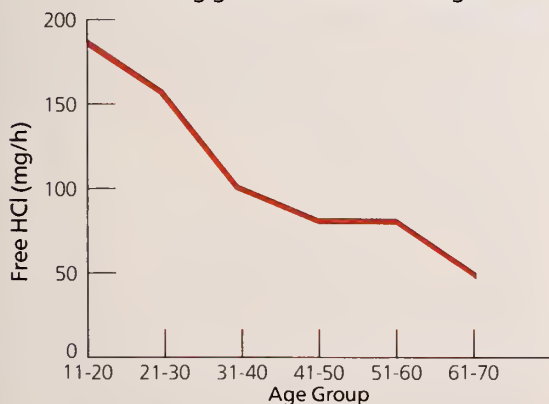
Specialized ulcer therapy

When advancing age signals reduced acid secretion



If your duodenal ulcer patient is over 55, decreased mucosal resistance is more likely to cause an ulcer than hypersecretion of acid-pepsin.¹ A tendency toward lower acid secretion with advancing age has been shown.^{2,3}

Declining gastric secretion and age³



CARAFATE® (sucralfate/Marion) makes sense as initial ulcer therapy for the elderly. Carafate provides ulcer

healing rates comparable to H₂ antagonists without the risk of systemic side effects or drug interactions—an important benefit for older patients.

The unique, nonsystemic action of Carafate enhances the body's own ulcer healing ability, strengthening the mucosal structure as it protects damaged tissue from further injury.

When advancing age signals reduced acid secretion, choose the specialized ulcer therapy of safe, nonsystemic Carafate.

Nothing works like

CARAFATE®
sucralfate/Marion

Please see adjoining page for references and brief summary of prescribing information.

1595H7

There's never been a better time for her



and PREMARIN[®]



Proven benefits beyond relief of vasomotor symptoms

No other estrogen proven effective for osteoporosis

Only conjugated estrogens tablets have established efficacy in both osteoporosis¹ and vasomotor symptoms* at 0.625 mg/day. No other estrogen, oral or transdermal, has established clinical evidence or minimum effective dose in both indications.

No estrogen proven safer

PREMARIN is the most extensively tested estrogen, with an unsurpassed record of long-term safety.

And clinical evidence shows a significantly reduced risk of endometrial hyperplasia when cycled with a progestin.²

PREMARIN[®]
(conjugated estrogens tablets)

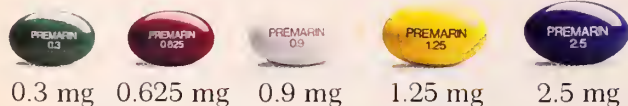
Most trusted for more reasons

*PREMARIN is indicated for moderate-to-severe vasomotor symptoms.

Please see following page for brief summary of prescribing information.

For moderate-to-severe vasomotor symptoms and for osteoporosis

PREMARIN® (conjugated estrogens tablets)



The appearance of these tablets is a trademark of Ayerst Laboratories.

BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION AND PATIENT INFORMATION, SEE PACKAGE CIRCULARS.)

PREMARIN® Brand of conjugated estrogens tablets, USP
PREMARIN® Brand of conjugated estrogens Vaginal Cream, in a nonliquetizing base

1 ESTROGENS HAVE BEEN REPORTED TO INCREASE THE RISK OF ENDOMETRIAL CARCINOMA. Three independent, case-controlled studies have reported an increased risk of endometrial cancer in postmenopausal women exposed to exogenous estrogens for more than one year. This risk was independent of the other known risk factors for endometrial cancer. These studies are further supported by the finding that incidence rates of endometrial cancer have increased sharply since 1969 in eight different areas of the United States with population-based cancer reporting systems, an increase which may be related to the rapidly expanding use of estrogens during the last decade. The three case-controlled studies reported that the risk of endometrial cancer in estrogen users was about 4.5 to 13.9 times greater than in nonusers. The risk appears to depend on both duration of treatment and on estrogen dose. In view of these findings, when estrogens are used for the treatment of menopausal symptoms, the lowest dose that will control symptoms should be utilized and medication should be discontinued as soon as possible. When prolonged treatment is medically indicated, the patient should be reassessed on at least a semi-annual basis to determine the need for continued therapy. Although the evidence must be considered preliminary, one study suggests that cyclic administration of low doses of estrogen may carry less risk than continuous administration; it therefore appears prudent to utilize such a regimen. Close clinical surveillance of all women taking estrogens is important. In all cases of undiagnosed persistent or recurring abnormal vaginal bleeding, adequate diagnostic measures should be undertaken to rule out malignancy. There is no evidence at present that "natural" estrogens are more or less hazardous than "synthetic" estrogens at equi-estrogenic doses.

2 ESTROGENS SHOULD NOT BE USED DURING PREGNANCY. The use of female sex hormones, both estrogens and progestogens, during early pregnancy may seriously damage the offspring. It has been shown that females exposed in utero to diethylstilbestrol, a nonsteroidal estrogen, have an increased risk of developing, in later life, a form of vaginal or cervical cancer that is ordinarily extremely rare. This risk has been estimated as not greater than 4 per 1,000 exposures. Furthermore, a high percentage of such exposed women (from 30% to 90%) have been found to have vaginal adenosis, epithelial changes of the vagina and cervix. Although these changes are histologically benign, it is not known whether they are precursors of malignancy. Although similar data are not available with the use of other estrogens, it cannot be presumed they would not induce similar changes. Several reports suggest an association between intrauterine exposure to female sex hormones and congenital anomalies, including congenital heart defects and limb-reduction defects. One case-controlled study estimated a 4-7 fold increased risk of limb-reduction defects in infants exposed in utero to sex hormones (oral contraceptives, hormone withdrawal tests for pregnancy, or attempted treatment for threatened abortion). Some of these exposures were very short and involved only a few days of treatment. The data suggest that the risk of limb-reduction defects in exposed fetuses is somewhat less than 1 per 1,000. In the past, female sex hormones have been used during pregnancy in an attempt to treat threatened or habitual abortion. There is considerable evidence that estrogens are ineffective for these indications, and there is no evidence from well-controlled studies that progestogens are effective for these uses. If PREMARIN is used during pregnancy or if the patient becomes pregnant while taking this drug, she should be apprised of the potential risks to the fetus, and the advisability of pregnancy continuation.

DESCRIPTION: PREMARIN (conjugated estrogens, USP) contains a mixture of estrogens, obtained exclusively from natural sources, blended to represent the average composition of material derived from pregnant mare's urine. It contains estrone, equilin, and 17 α -dihydroequilin, together with smaller amounts of 17 α -estradiol, equilenin, and 17 α -dihydroequilenin as salts of their sulfate esters. Tablets are available in 0.3 mg, 0.625 mg, 0.9 mg, 1.25 mg, and 2.5 mg strengths of conjugated estrogens. Cream is available as 0.625 mg conjugated estrogens per gram.

INDICATIONS AND USAGE: PREMARIN (conjugated estrogens tablets, USP): Moderate-to-severe vasomotor symptoms associated with the menopause (There is no evidence that estrogens are effective for nervous symptoms or depression without associated vasomotor symptoms and they should not be used to treat such conditions.) Osteoporosis (abnormally low bone mass) Atrophic vaginitis Kraurosis vulvae Female castration. PREMARIN (conjugated estrogens) Vaginal Cream is indicated in the treatment of atrophic vaginitis and kraurosis vulvae.

PREMARIN HAS NOT BEEN SHOWN TO BE EFFECTIVE FOR ANY PURPOSE DURING PREGNANCY AND ITS USE MAY CAUSE SEVERE HARM TO THE FETUS (SEE BOXED WARNING).

Concomitant Progestin Use: The lowest effective dose appropriate for the specific indication should be utilized. Studies of the addition of a progestin for 7 or more days of a cycle of estrogen administration have reported a lowered incidence of endometrial hyperplasia. Morphological and biochemical studies of the endometrium suggest that 10 to 13 days of progestin are needed to provide maximal maturation of the endometrium and to eliminate any hyperplastic changes. Whether this will provide protection from endometrial carcinoma has not been clearly established. There are possible additional risks which may be associated with the inclusion of progestin in estrogen replacement regimens (See PRECAUTIONS.) The choice of progestin and dosage may be important; product labeling should be reviewed to minimize possible adverse effects.

CONTRAINDICATIONS: Estrogens should not be used in women (or men) with any of the following conditions: 1. Known or suspected cancer of the breast except in appropriately selected patients being treated for metastatic disease. 2. Known or suspected estrogen-dependent neoplasia. 3. Known or suspected pregnancy (See Boxed Warning). 4. Undiagnosed abnormal genital bleeding. 5. Active thrombophlebitis or thromboembolic disorders. 6. A past history of thrombophlebitis, thrombosis, or thromboembolic disorders associated with previous estrogen use (except when used in treatment of breast or prostatic malignancy).

WARNINGS: Estrogens have been reported to increase the risk of endometrial carcinoma (See Boxed Warning). However, a recent large, case-controlled study indicated no increase in risk of breast cancer in postmenopausal women. A recent study has reported a 2- to 3-fold increase in the risk of surgically confirmed gallbladder disease in women receiving postmenopausal estrogens.

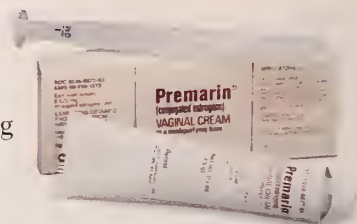
Adverse effects of oral contraceptives may be expected at the larger doses of estrogen used to treat prostatic or breast cancer or postpartum breast engorgement; it has been shown that there is an increased risk of thrombosis in men receiving estrogens for prostatic cancer and women for postpartum breast engorgement. Users of oral contraceptives have an increased risk of diseases, such as thrombophlebitis, pulmonary embolism, stroke, and myocardial infarction. Cases of retinal thrombosis, mesenteric thrombosis, and optic neuritis have been reported in oral contraceptive users. An increased risk of postsurgery thromboembolic complications has also been reported in users of oral contraceptives. If feasible, estrogen should be discontinued at least 4 weeks before surgery of the type associated with an increased risk of thromboembolism, or during periods of prolonged immobilization. Estrogens should not be used in persons with active thrombophlebitis, thromboembolic disorders, or in persons with a history of such disorders in association with estrogen use. They should be used with caution in patients with cerebral vascular or coronary artery disease. Large doses (5 mg conjugated estrogens per day), comparable to those used to treat cancer of the prostate and breast, have been shown to increase the risk of nontal myocardial infarction, pulmonary embolism, and thrombophlebitis. When doses of this size are used, any of the thromboembolic and thrombotic adverse effects should be considered a clear risk.

For atrophic vaginitis

PREMARIN® (conjugated estrogens)

Vaginal Cream

0.625 mg/g



Benign hepatic adenomas should be considered in estrogen users having abdominal pain and tenderness, abdominal mass, or hypovolemic shock. Hepatocellular carcinoma has been reported in women taking estrogen-containing oral contraceptives. Increased blood pressure may occur with use of estrogens in the menopause and blood pressure should be monitored with estrogen use. A worsening of glucose tolerance has been observed in patients on estrogen-containing oral contraceptives. For this reason, diabetic patients should be carefully observed. Estrogens may lead to severe hypercalcemia in patients with breast cancer and bone metastases.

PRECAUTIONS: Physical examination and a complete medical and family history should be taken prior to the initiation of any estrogen therapy with special reference to blood pressure, breasts, abdomen, and pelvic organs, and should include a Papanicolaou smear. As a general rule, estrogen should not be prescribed for longer than one year without another physical examination being performed. Conditions influenced by fluid retention, such as asthma, epilepsy, migraine, and cardiac or renal dysfunction, require careful observation. Certain patients may develop manifestations of excessive estrogenic stimulation, such as abnormal or excessive uterine bleeding, mastodynia, etc. Prolonged administration of unopposed estrogen therapy has been reported to increase the risk of endometrial hyperplasia in some patients. Oral contraceptives appear to be associated with an increased incidence of mental depression. Patients with a history of depression should be carefully observed. Pre-existing uterine leiomyomata may increase in size during estrogen use. The pathologist should be advised of estrogen therapy when relevant specimens are submitted. If jaundice develops in any patient receiving estrogen, the medication should be discontinued while the cause is investigated. Estrogens should be used with care in patients with impaired liver function, renal insufficiency, metabolic bone diseases associated with hypercalcemia or in young patients in whom bone growth is not yet complete. If concomitant progestin therapy is used, potential risks may include adverse effects on carbohydrate and lipid metabolism.

The following changes may be expected with larger doses of estrogen:

- Increased sulfobromophthalen retention
- Increased prothrombin and factors VII, VIII, IX, and X, decreased antithrombin 3, increased norepinephrine-induced platelet aggregability
- Increased thyroid binding globulin (TBG) leading to increased circulating total thyroid hormone, as measured by PBI, T_4 by column, or T_4 by radioimmunoassay. Free T_3 resin uptake is decreased, reflecting the elevated TBG. Free T_4 concentration is unaltered.
- Impaired glucose tolerance
- Decreased pregnandiol excretion
- Reduced response to methylxanthine test
- Reduced serum folate concentration
- Increased serum triglyceride and phospholipid concentration

As a general principle, the administration of any drug to nursing mothers should be done only when clearly necessary since many drugs are excreted in human milk.

Long-term, continuous administration of natural and synthetic estrogens in certain animal species increases the frequency of carcinomas of the breast, cervix, vagina, and liver. However, in a recent, large case-controlled study of postmenopausal women there was no increase in risk of breast cancer with use of conjugated estrogens.

ADVERSE REACTIONS: The following have been reported with estrogenic therapy, including oral contraceptives: breakthrough bleeding, spotting, change in menstrual flow, dysmenorrhea, premenstrual-like syndrome, amenorrhea during and after treatment, increase in size of uterine fibromyoma, vaginal candidiasis, change in cervical erosion and in degree of cervical secretion, cystitis-like syndrome, tenderness, enlargement, secretion (of breasts), nausea, vomiting, abdominal cramps, bloating, cholestatic jaundice, chloasma or melasma which may persist when drug is discontinued, erythema multiforme, erythema nodosum, hemorrhagic eruption, loss of scalp hair, hirsutism, steepening of corneal curvature, intolerance to contact lenses, headache, migraine, dizziness, mental depression, chorea, increase or decrease in weight, reduced carbohydrate tolerance, aggravation of porphyria, edema, changes in libido.

ACUTE OVERDOSAGE: May cause nausea, and withdrawal bleeding may occur in females.

DOSEAGE AND ADMINISTRATION:

PREMARIN® Brand of conjugated estrogens tablets, USP

1. *Given cyclically for short-term use only.* For treatment of moderate-to-severe vasomotor symptoms, atrophic vaginitis, or kraurosis vulvae associated with the menopause (0.3 mg to 1.25 mg or more daily). The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible. Administration should be cyclic (eg, three weeks on and one week off). Attempts to discontinue or taper medication should be made at three- to six-month intervals.

2. *Given cyclically.* Osteoporosis. Female castration. Osteoporosis — 0.625 mg daily. Administration should be cyclic (eg, three weeks on and one week off). Female castration — 1.25 mg daily, cyclically. Adjust upward or downward according to response of the patient. For maintenance, adjust dosage to lowest level that will provide effective control.

Patients with an intact uterus should be monitored for signs of endometrial cancer and appropriate measures taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

PREMARIN® Brand of conjugated estrogens Vaginal Cream

Given cyclically for short-term use only. For treatment of atrophic vaginitis or kraurosis vulvae. The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible. Administration should be cyclic (eg, three weeks on and one week off). Attempts to discontinue or taper medication should be made at three- to six-month intervals.

Usual dosage range: 2 g to 4 g daily, intravaginally, depending on the severity of the condition. Treated patients with an intact uterus should be monitored closely for signs of endometrial cancer and appropriate diagnostic measures should be taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

References:

1. Lindsay R, Hart OM, Clark DM. The minimum effective dose of estrogen for prevention of postmenopausal bone loss. *Obstet Gynecol* 1984;63:759-763. 2. Studd JWW, Thom MH, Paterson MEL, et al. The prevention and treatment of endometrial pathology in postmenopausal women receiving exogenous estrogens, in Pasetto N, Paoletti R, Ambrosi JL (eds) *The Menopause and Postmenopause*. Lancaster, England, MTP Press Ltd, 1980, chap 13.

© 1987 Ayerst Laboratories
All rights reserved

Ayerst

AYERST LABORATORIES
New York, NY 10017

THE NEBRASKA MEDICAL JOURNAL

Time To Change

WHEN I accepted the Editorship of the **Nebraska Medical Journal** on December 1, 1981, I anticipated that my interest and enthusiasm to carry out the responsibilities of the Editor, **Nebraska Medical Journal**, would last approximately five or six years. I was right - it is time for me to turn over the reins of the Editorship to another, more motivated individual with new ideas. Doctor Ben Gelber, a neurosurgeon in Lincoln, has accepted the job and will assume duties October 1, 1987.

It has been an enjoyable experience and a great honor to serve you and the Board of Directors, Nebraska Medical Association. I especially want to express a warm thank you to

ALAN D. FORKER, M.D.

my Associate Editors and the Editorial Board that have been a great help to me over the past six years. Thank you very much for your help and support.

I look forward to the new direction and leadership of our new Editor, Doctor Ben Gelber.

Alan D. Forker

High Frequency Ventilation in Neonatal Pulmonary Interstitial Emphysema

IN recent years dramatic improvements have been made in the survival of premature infants. These successes have been tempered by an increase in the incidence of pulmonary complications including pulmonary air leaks and bronchopulmonary dysplasia. Some of these complications are inevitable consequences of our current methods of ventilator support. Recent evidence suggests that high frequency ventilation (HFV) may be less harmful to the immature lung than conventional ventilation (CV) and may in some cases be effective even when conventional support fails. These factors may make HFV advantageous in the management of neonates with pulmonary interstitial emphysema (PIE).

We report our experience during a three year period using HFV in the treatment of preterm infants with severe PIE and intractable respiratory failure. We also discuss the theoretical and experimental basis for the use of HFV in PIE.

Method

The hospital charts and radiographs of all infants who were treated with HFV at the University of Nebraska Medical Center from January 1, 1982 until December 31, 1984 were reviewed. Criteria for inclusion in this study included respiratory deterioration despite maximum conventional ventilator support, radiologic evidence of PIE and chart documentation of blood gases and ventilator settings prior to and following the initiation of HFV.

Sechrist pressure cycled ventilators (Model IV-100 and IV-100B, Sechrist Medical Products, Anaheim, CA) were used for CV and Bird Volumetric Diffusive Respirators (VDR) (Percussionaire Corp., Sandpoint, ID) were used for HFV. Mean airway pressures were determined using Novamatrix Pneumogard monitors (Novamatrix Medical System, Wallingford, CT). Uncuffed single lumen endotracheal tubes were used in all cases and

BRIAN R. WOOD, M.D.

LARRY D. EGGERT, M.D.*

DAVID L. BOLAM, M.D.

ROBERT M. NELSON, JR., M.D.

University of Nebraska Medical Center, Omaha, NE
68105-1065

pressures were measured at the level of the proximal endotracheal tube connector. To prevent changes in the dynamic response of the pressure monitoring system, endotracheal tube size and ventilator circuit tubing length were kept constant for each infant during the study. All infants received pancuronium bromide for muscle relaxation. No attempt was made to control for the pressure changes inherent in the frequency response of the pressure measuring system.

The infants examined in this study were switched to HFV only when it was apparent to the attending neonatologist that CV was unable to prevent the continued deterioration of their respiratory status. Initial HFV settings were determined by the attending neonatologist based on clinical judgement and were subsequently modified as dictated by arterial blood gases and clinical status. To prevent atelectasis and to minimize the deleterious effect that continuous HFV has been shown to have on cardiac output, intermittent conventional breaths were also delivered by the Bird VDR. The best blood gas, mean airway pressure (MAP) and $P(A-a)O_2$ in the last six hours of CV was compared with the best in the first six hours of HFV. The last blood gas, MAP and $P(A-a)O_2$ analyzed while an infant was being ventilated conventionally was compared with the first obtained during HFV and with the best obtained during the first six

*Send reprint requests to Larry D. Eggert, M.D., University of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, NE 68105-1065.

hours of HFV, (best being defined as highest PaO₂). This six hour period was chosen to provide adequate time for the optimization of ventilator settings. Statistical analysis was performed using the two-tailed Student t-test for paired samples.

Informed parental consent was obtained prior to initiation of high frequency ventilation. This study was approved by the University of

Nebraska Medical Center Institutional Review Board for Research with Human Subjects.

Results

Criteria for inclusion in this study were met by sixteen critically ill white neonates. Demographic data is included in Table 1. Mean ventilator settings and blood gases are listed in Table 2.

Table 1.
Demographic Data

<u>Patient</u>	<u>Sex</u>	<u>Birth Weight</u> (Grams)	<u>Gestational Age</u> (Weeks)	<u>Primary Indication</u> for HFV	<u>Age at Initiation</u> of HFV
1	Female	800	27	PIE, RDS	2 days
2	Male	680	26.5	PIE	5 days
3	Male	620	25	PIE	3 hours
	Male	980	30	PIE, BPD	27 days
5	Female	710	27	PIE	24 hours
6	Female	665	24	PIE	10 days
7	Male	880	27.5	PIE, RDS	10 hours
8	Male	720	26	PIE	8 hours
9	Female	960	28	PIE, BPD	53 days
10	Female	750	25.5	PIE, RDS	2 hours
11	Male	770	26	PIE, RDS	24 hours
12	Female	1500	32	PIE, BPD	42 days
13	Male	1770	34	PIE	8 days
14	Female	2330	34	PIE, RDS	2 days
15	Female	2240	34	PIE, RDS	2 days
16	Male	1960	34	PIE, RDS	24 hours
		mean 1146	mean 28.8		
		range 620-2330	range 24-34		

Table 2.
Conventional vs High Frequency Data

<u>Mean</u>	<u>Conventional Ventilator</u>		<u>High Frequency Ventilator</u>	
	<u>Best</u>	<u>Last</u>	<u>First</u>	<u>Best</u>
FiO ₂	.98	.98	.98	.98
Rate	97.4	100	367/16.6	393/16.8
PIP	32.4	33	33	34
PEEP	4.4	4	4	4
MAP	16.5	17.2	13.1*	13.8+ (p<.021)
P(A-a)O ₂	544.5	554.8	544.7 n.s.	535.9+ (p<.04)
PaO ₂	59.7	49.4	59.5 n.s.	68.3+ (p<.021)
PaCO ₂	50.25	48.8	46.1 n.s.	42.6+ n.s.

* Last CV vs first HFV p<.05

+ Last CV vs Best HVG p<.05

During HFV rate is expressed as HFV rate/CV rate

Comparing the last blood gas and pressure parameters obtained during CV with the first obtained during HFV, MAP decreased from 17.2 to 13.1 ($p < .01$), while PaO₂, PaCO₂ and P(A-a)O₂ were not significantly altered. When comparing the last blood gas and pressure parameters obtained during CV with the best obtained during HFV, PaO₂ increased from 49.4 torr to 68.3 torr ($p < .05$), PaCO₂ decreased from 48.8 torr to 42.6 torr ($p < .001$), P(A-a)O₂ decreased from 554.8 to 535.9 ($p < .001$), and MAP decreased from 17.2 to 13.8 ($p < .01$). Comparing the best blood gas and pressure parameters obtained during CV with the best obtained during HFV, no statistical significance was demonstrated.

Although infants selected for this study were thought to be dying, two survived until the time of discharge and both showed radiologic evidence of decompression of their PIE within a few hours following the initiation of HFV.

Discussion

Our study demonstrates the ability of HFV to achieve adequate gas exchange and to improve oxygenation in infants with severe PIE, while at the same time allowing the use of significantly lower mean airway pressures than has been required during CV.

PIE forms when terminal airways rupture and air dissects along the bronchovascular sheaths and collects in the pulmonary interstitium. The lung becomes progressively stiffer and airway resistance rises, decreasing minute ventilation and impeding pulmonary blood flow. Gas exchange is compromised and higher pressures are required to ventilate the lung, further exacerbating the air leak and PIE.²

During HFV extremely rapid ventilator rates are used generally ranging from 150 to over 2000 breaths per minute.³ Lower airway pressures can be used during HFV because the mechanism of gas movement differs from that of CV. During CV, gas is moved into airways by bulk flow. The pressure required to move the tidal volume (TV) with each breath is dependent on the compliance of the respiratory system and the airway resistance. This volume of gas must exceed the dead space of the respiratory system in order for gas exchange to occur. Because flow velocity is low, gas exchange in the terminal airways occurs primarily by simple molecular diffusion.

As the ventilator rate is increased, flow velocities increase and above a critical flow rate turbulence occurs. As total effective diffusion increases, the contribution made by bulk flow becomes progressively less. During HFV adequate gas exchange can be accomplished using tidal volumes that are less than the dead space of the respiratory system and using pressures that are less than those needed for complete alveolar expansion.

As with CV, oxygenation during HFV is related to the FiO₂ and the MAP while ventilation is related to minute volume (oscillatory amplitude and frequency). If the MAP is too low, atelectasis may occur; if the MAP is too high, pulmonary blood flow and cardiac output may be compromised.^{4,5} In either case a ventilation perfusion mismatch will result.⁶

During HFV intrapulmonary pressure swings and fluctuations in alveolar pressures have been shown to be considerably less than during CV.⁷ This may reduce the likelihood of hemodynamic compromise and of iatrogenically induced barotrauma. Because barotrauma is of great concern during the ventilator management of extremely immature neonates, differences in the distribution of pressure within the pulmonary tree, when comparing high frequency ventilation to conventional ventilation, are extremely important.

During CV, pressure distribution within the airways is almost uniform. The pressure measured at the proximal end of the endotracheal tube is nearly equal to the alveolar distending pressure. During HFV, gas exchange can be maintained with peak tracheal pressures significantly lower than those required during conventional ventilation. Peak tracheal pressures decrease with increasing ventilator rates until a critical value is reached called resonant frequency.⁸ This is the rate at which the energy cost to produce flow in the trachea is lowest and may be the rate at which effective gas exchange is optimal. Variations in the compliance of the respiratory system and in the resistance of peripheral airways appear to be responsible for variations in the resonant frequency among groups of individuals and in single individuals during the course of a disease.

During HFV, pressure swings at the level of the terminal airways and alveoli are inversely

related to ventilator rate.⁷ For a given MAP, HFV may induce less barotrauma than CV since peak pressures and phasic lung distention are reduced.⁹ Therefore, in cases in which barotrauma is of concern, swings in terminal airway distending pressure can be significantly reduced by using rates greater than or equal to the resonant frequency of the lung. During HFV, because of airway resistance, pressure swings in the trachea and distal respiratory tree are less than those measured at the proximal end of the endotracheal tube. Differences in MAP and intrapulmonary pressure swings may be important in the pathogenesis of barotrauma. We theorize that the use of reduced pressures during HFV allows resorption of interstitial gas to take place without promoting further gas escape from the airways. With lower pressures less overdistension of emphysematous areas of lung and less compromise of more normal areas of lung should occur.

As with CV the possibility of adverse cardiovascular effects during HFV is of concern. Heart rate and blood pressure trends were difficult to assess in our patients due to the instability of the infants prior to the initiation of HFV. Metabolic acidosis was documented in several instances prior to the initiation of HFV, but was not observed to worsen following its initiation. We suspect that the metabolic acidosis was related to decreased cardiac output during CV at high MAP's and did not worsen during HFV because MAP's were lowered and cardiac output improved. Studies to evaluate the effect of HFV on cardiac output in an animal model are currently underway in our laboratory.

In summary the Bird high frequency ventilator proved capable of maintaining adequate gas exchange and improving oxygenation, while at the same time allowing the use of lower mean airway pressures in a group of premature infants with PIE and intractable respiratory failure. The principle advantage of high frequency over conventional ventilation in infants with PIE is that lower peak pressures and mean airway pressures can be used without compromising gas exchange or oxygenation. The resolution of PIE noted in the survivors in our series is most likely attributable to the use of these lower airway pressures.

We speculate that the physiology of HFV allowing the use of lower airway pressures, reduces barotrauma and may decrease the likelihood of pulmonary air leak. The use of HFV earlier in the course of severe neonatal lung disease may produce less pulmonary damage than CV and may decrease the incidence and severity of chronic lung disease.

Although high frequency ventilation is a promising therapeutic modality it is still experimental and requires further investigation to define its precise role in the support of the neonate with PIE. The application of HFV to other neonatal pulmonary disease processes will also need to be investigated.

Summary

We used high frequency ventilation in a series of infants in whom conventional ventilation (CV) had failed to provide adequate oxygenation. The study group consisted of 8 male and 8 female critically ill neonates. Gestational ages ranged from 24 to 34 weeks (mean 28.8 wks.) and birth weights ranged from 620 to 2330 grams (mean 1146 gms). In all cases the indications for high frequency ventilation (HFV) were deterioration of respiratory status despite conventional ventilatory support and severe pulmonary interstitial emphysema (PIE).

The best blood gas achieved during the last six hours of conventional ventilation was compared with the best blood gas achieved during the first six hours of HFV. In addition the last blood gas obtained during CV was compared with the first blood gas obtained during HFV and the last blood gas obtained during CV was compared with the best blood gas obtained during the first six hours of HFV.

Comparing last blood gas and pressure parameters during CV to the first during HFV, mean airway pressure (MAP), decreased from 17.2 to 13.1 ($p < .01$), while PaO_2 , PaCO_2 , and P(A-a)O_2 showed no significant changes. Comparing last blood gas and pressure parameters during CV with best during HFV, PaO_2 increased from 49.4 to 68.3 ($p < .05$), PaCO_2 decreased from 48.8 to 42.6 ($p < .001$), P(A-a)O_2 decreased from 554.8 to 535.9 ($p < .001$), and MAP decreased from 17.2 to 13.8 ($p < .01$). When comparing best blood gas and pressure parameters during CV with the best during HFV, no statistically signifi-

cant changes were noted in PaO_2 , PaCO_2 or MAP.

The high frequency ventilator maintained adequate gas exchange and improved oxygenation while allowing the use of lower mean airway pressures than could be used with conventional ventilation.

Acknowledgement

The authors acknowledge the technical and secretarial assistance of Mark Olsen, Diane Hayes, Robin Peters, Sara Wilke and Dr. Patricia Leuschen.

References

1. Frantz ID, Stark AR, Werthammer J: Improvement in pulmonary interstitial emphysema with high frequency ventilation. *Pediatr Res* 1981; 15:719.
2. Kirschner PA, Stauss L: Pulmonary interstitial emphysema in newborn infants: precursors and sequelae. *Dis Chest* 1964; 46:417-426.
3. Slutsky AS, Drazen JM, Ingram RH Jr, et al: effective pulmonary ventilation with small-volume oscillations at high frequency. *Science* 1980; 209:609-611.
4. Gioia FR, Rinehart G, Traystman RJ, et al: Regional and lobar pulmonary blood flow with high frequency ventilation. *Pediatr Res* 1981; 15:719.
5. Brusasco V, Knopp TJ, Rehder K: Ventilation perfusion (V/Q) relationship and arterial oxygenation during high frequency ventilation, abstracted. *Physiologist* 1981; 24:7.
6. Gilbert R, Keighley JF: The arterial/alveolar oxygen tension ratio: An index of gas exchange applicable to varying inspired oxygen concentrations. *Am Rev Resp Dis.* 1974; 109:142.
7. Frantz ID, Close RH: Alveolar Pressure Swings during High Frequency Ventilation in Rabbits. *Pediatr Res* 1985; 19:162-166.
8. Frantz ID, Werthammer J, Stark AR: High frequency ventilation in premature infants with lung disease: Adequate gas exchange at low tracheal pressure. *Pediatrics* 1983; 71:483-488.
9. Marchak BE, Thompson WK, Duffy P, et al: Treatment of RDS by high-frequency oscillatory ventilation: A preliminary report. *J Pediatr* 1981; 99:287-292.

The Role of Radiotherapy in the Treatment of Biliary Tract Neoplasms

DURING the past several years, major advances have been made in the treatment of neoplastic diseases. Such advances include improved use of chemotherapy and more sophisticated delivery of external irradiation and interstitial implants. In addition, these treatment modalities are being used more in a cooperative effort with surgery in a three-pronged attack on neoplastic disease. Along with this improved knowledge of treatment modalities, attention is being directed to the importance of obtaining local control of tumor for eventual increased survival. Suit and Westgate indicate that if all local tumor failures were eliminated, many more patients could be cured provided the efficacy of treatment of the primary and regional disease were substantially improved. Examples of higher survival associated with more effective local therapy are medulloblastoma, ependymoma, bladder cancer, oral cavity cancer and cancer of the prostate and rectum.¹ A prime example of this type of tumor is carcinoma of the biliary passages. The purpose of this discussion is to illustrate the importance of obtaining local control of biliary tract neoplasms and to present current ideas regarding their management.

Neoplasms of the extrahepatic biliary passages include carcinoma of the gallbladder and extrahepatic bile ducts. These neoplasms are rare with a high incidence of local recurrence which accounts for the lethality and dismal prognosis. The majority of patients initially present with unresectable disease.² Gallbladder carcinoma occurs more frequently than the biliary duct carcinoma and, though rare types such as squamous cell carcinoma occur, most of these neoplasms are adenocarcinoma.³ They have a deserved reputation of being almost invariably fatal because when patients initially present with disease, it is often unresectable.³

About 80 deaths per week are caused by these neoplasms.⁴ The main routes of spread

ALBERT R. FRANK, M.D.*

D. R. OWEN, M.D.

Nebraska Methodist Hospital, 8303 Dodge Street,
Omaha, Nebraska 68114

are by direct invasion to adjacent structures and early metastases to regional lymph nodes in 40 to 50 percent of patients. In addition spread occurs to retroperitoneal nodes, the liver and the peritoneal cavity.⁵ Death usually results from local-regional disease.⁶ Distant metastases are rare; therefore, treatment should be aimed at the potential infradiaphragmatic site of failure. Vital normal tissue structures surround the biliary passages and make resection possible only with limited disease. Attempts have been made to improve the palliation and survival following surgery by utilizing adjuvant treatment, such as radiotherapy and chemotherapy.⁷

The usefulness of preoperative investigations is limited in determining tumor extent. Percutaneous transhepatic cholangiography (PTHC) nearly always shows the area of obstruction,^{3,6} and biliary drainage is provided along with a route for endocavitary irradiation. However, if a biliary-bowel anastomosis is planned, then PTHC should not be done as it will decompress the bile ducts, making surgery difficult if not impossible.⁴ ECRP may be useful to define the lower extent of tumor. Extraductal tumor extent is not defined by ECRP or PTHC. Ultrasound and CT scanning are not always helpful in defining the tumor mass and CT scans accurately predict liver involvement in about 50 percent of the time.⁶ Since radiographic studies have limited value in postoperative treatment planning, it becomes the surgeon's responsibility to define the tumor carefully at the time of surgery.

*Reprint Requests to: Albert R. Frank, M.D., Nebraska Methodist Hospital, 8303 Dodge Street, Omaha, NE 68114.

Surgery has a diagnostic, palliative and in some cases curative role in the management of these tumors. Because of the early spread to liver and regional nodes, and anatomical limitations, curative surgery is attempted in only about 15 percent of patients. Operative mortality is 11-28 percent and five year survival is 5 percent.⁶ An unsuspected carcinoma may be found in a gallbladder when it is removed for gallstones. Such patients with a "Pathologist's cancer" (Figure 1) have a more favorable prognosis, but are still at high risk for developing local recurrence of disease.⁸ Even though these tumors are usually amenable to curative surgery, some types of palliative by-pass procedure may be performed. The goal of surgery would be to decompress the biliary tree to prevent the development of intractable pruritis associated with obstructive jaundice. Recent surgical literature points to a higher resectability rate,⁹ but the recognized patterns of failure indicate the need for adjuvant treatment.¹⁰ Surgery is able to define the limits of the tumor, which should be marked with clips to aid the radiotherapist in delivering postoperative irradiation.

These lesions were formerly considered radioresistant¹¹ and radiotherapy was not recommended. However, we now know such pessimism is without foundation. Radiation has a significant palliative role with both primary tumors and metastases to the porta hepatis. Radiotherapy also plays an occasional curative role when the primary lesions recur or cannot be resected.¹³ The potential value of adjuvant irradiation is underscored by the data on the patterns of failure after curative operative procedures.¹⁰ Following simple cystectomy for gallbladder cancer, 86 percent of patients with early treatment failure have local recurrence. Also, about one half of these alive at five years had local recurrence.⁵ Similarly local-regional recurrence is the usual cause of death for bile duct lesions.

The reason for this high rate of recurrent disease is the development of microscopic spread to lymph nodes and surrounding tissue.⁵ Such disease is undetectable at the time of surgery but statistically present in the majority of patients. Therefore, postoperative external irradiation is currently being recommended in order to eradicate such microscopic residual. The doses we are recommending are

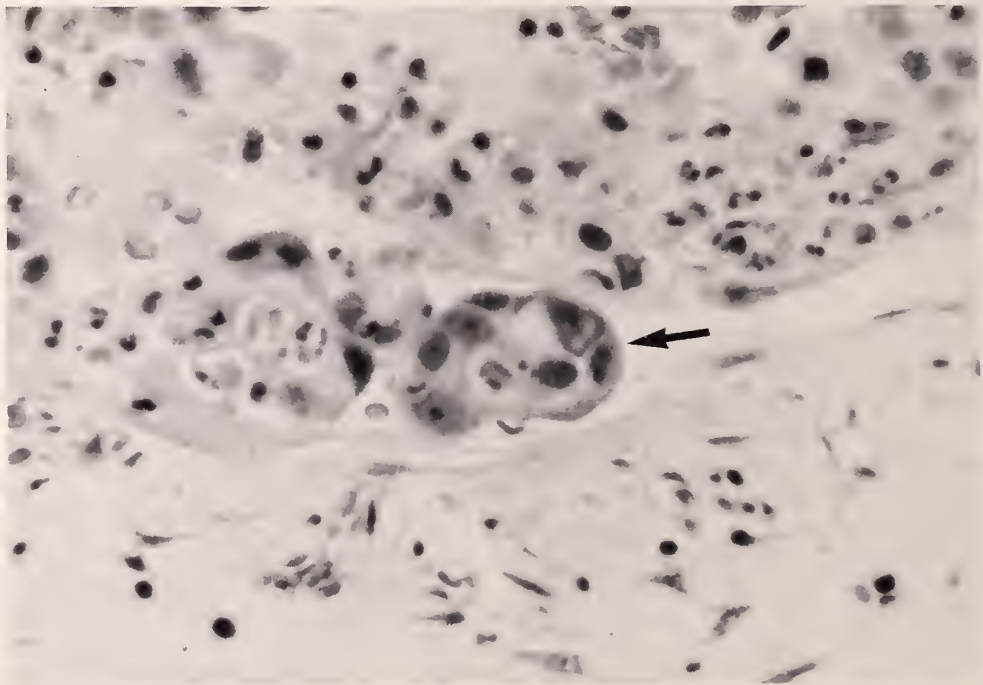


Figure 1
Case of "Pathologist's Cancer"

65-year-old white male presented with RUQ pain and fever. Cholecystitis diagnosed. Celiotomy showed inflamed gallbladder with duodenal fistula. Cholecystectomy specimen revealed gallbladder carcinoma. Photomicrograph shows tumor cell lymphatic channel of gallbladder wall (arrow).

usually 4,500-5,000 rads in 5-6 weeks. The irradiated area includes the tumor bed and areas of potential microscopic lymph node involvement along with the porta hepatis, pancreatic duodenal system and celiac axis. When gross residual disease is present, it is recommended that the same areas be treated. However, the presence of dose-limited structures in the upper abdomen prevents the safe delivery of higher radiation doses with most external beam techniques.³ Though a cure may be obtained with modest doses, this is an exception and higher doses are necessary to control gross disease. Therefore, some other means than external beam irradiation is necessary. Such means that are available include implantation at the time of a second celiotomy. This type of procedure is usually performed for a sizable amount of gross residual tumor, particularly in the bile duct area. If small amounts of tumor are left behind, such as a Klatskin tumor, a catheter may be placed in the tube used for biliary decompression and the tumor irradiated with iridium sources. A dose of 2,000-2,500 rads can be delivered to a 0.5 to 1.0 cm radius, dependent on the initial tumor volume and proximity of dose limiting structures.¹² The electron beam may be utilized at the time of original surgery and a significant dose of irradiation may be delivered in a short period of time. However, the bile duct area has a limited tolerance to such biologically equivalent high doses of radiation.¹⁴ so implantation with I-125 seeds may be the preferable method of delivering boost doses of radiation to this area.

An Illustrative Case Example (Figures 2-8):

A 60-year-old white female presented to her physician with obstructive jaundice in Oct. 1983. At the time of celiotomy, she was found to have an unresectable carcinoma of the left hepatic and common hepatic bile ducts. A T-tube was placed for bile drainage and the patient was referred for adjuvant treatment. She was then treated with a course of megavoltage irradiation to the area of tumor involvement. The radiated area received a tumor dose of 4,000 rads in 4½ weeks. Subsequently, she underwent a second celiotomy at which time L-tubes were placed in both the right and left hepatic ducts and the tumor was implanted with I-125 seeds. The

patient tolerated this procedure well and had an uncomplicated post-operative course.

She was later seen at regular intervals for follow-up evaluation. Approximately three years following her initial surgery, she appeared to be doing well and her abdominal CT scan revealed no evidence of recurrent disease. At that point, we were optimistic that she may do quite well but her prognosis remained very guarded since survival of five years with such a disease presentation would be rare.

The patient subsequently experienced weight loss, anemia and electrolyte disturbance and she was admitted to the hospital for supportive treatment. Physical examination revealed metastatic adenopathy in the right cervical area and tumor was palpated in the abdominal surgical scar. Her chest x-ray revealed bilateral infiltrates. She experienced rapid decline in her condition and expired in January 1987.



Figure 2
68-year-old white female presented with obstructive jaundice. Unresectable cholangiocarcinoma of left hepatic and common hepatic bile ducts found at celiotomy. Cholangiogram demonstrating site of left biliary duct tumor obstruction.



Figure 3
Photomicrograph of biopsy specimen demonstrates well differentiated papillary adenocarcinoma.



Figure 4
Radiograph of external beam treatment portal. Tumor area received 4,150 rads/5 weeks.



Figure 5
Post implant x-ray showing Iodine-125 seeds in tumor.

Her case illustrates the biologic behavior and natural history of biliary tract malignancy in that once local control of disease is obtained, such patients may have their survival markedly

prolonged particularly with a tumor with an indolent biologic behavior.

Summary:

The main cause of death with bile tract

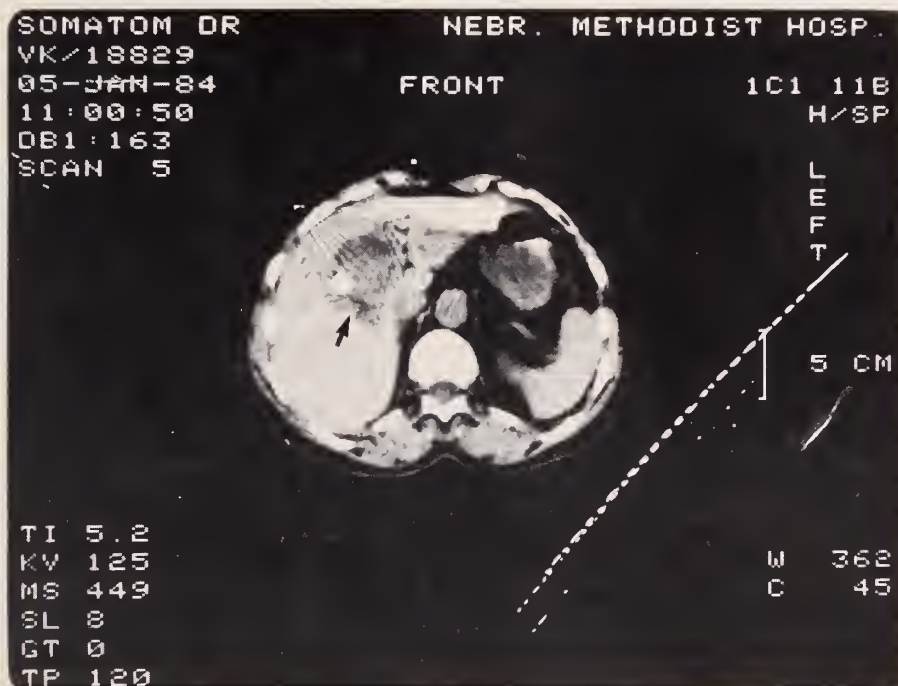


Figure 6
Abdominal CT scan showing tumor mass in porta hepatis area.

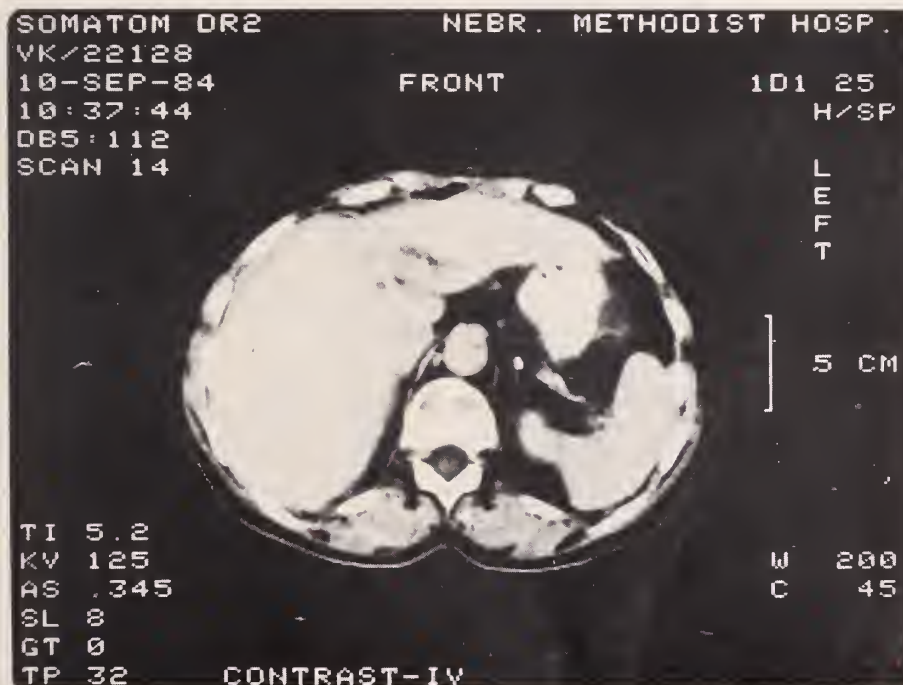


Figure 7
CT scan without evidence of recurrence eight months after radioactive iodine seed implant.

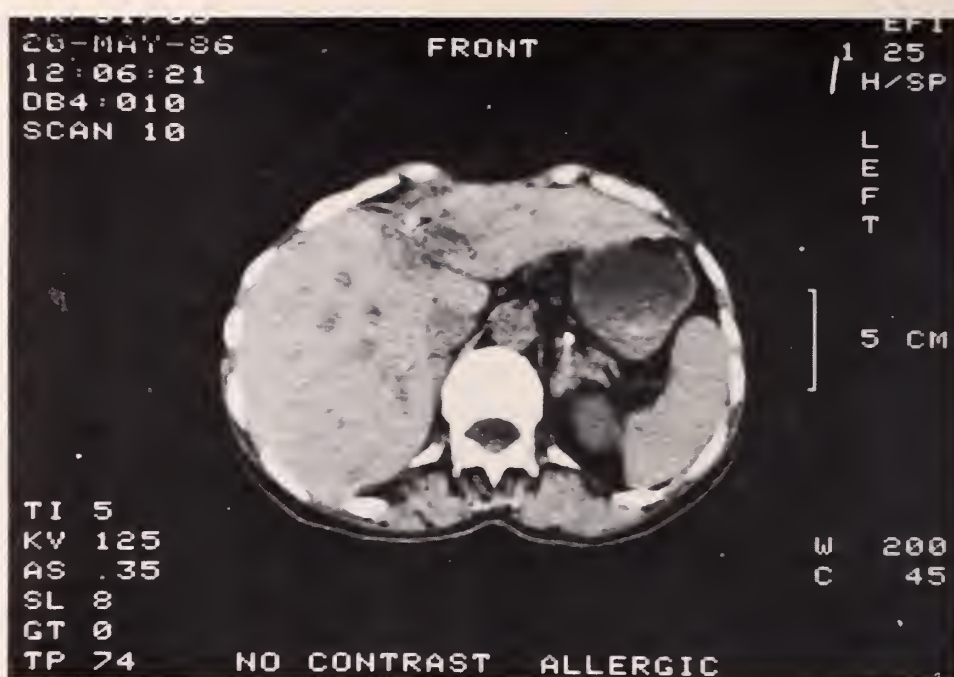


Figure 8
CT scan 2½ years after tumor implant. No evidence of recurrence.

malignancy is local recurrence of disease. Distant metastases are a rare event. Long follow-up is necessary after the primary tumor has been treated since metastatic disease may not become evident for years, especially with a tumor with an indolent biologic behavior. Several institutions have reported their treatment results in the literature and although these neoplasms have a very grim prognosis, improvement with palliation and median survival has been obtained. The use of irradiation has resulted in a rare cure but more importantly, the median survival for these patients have been doubled with the use of adjuvant irradiation.⁸ Also, marked improvement in palliation for these patients have been noted.¹⁵ In the future, the addition of chemotherapy may prove of some benefit in treating these neoplasms. As our understanding of surgery, tumor biology, radiation effects and chemotherapy increases, our goal will be to arrive at an optimal combined treatment to obtain control of these regional neoplasms.

References

1. Suit HD, Westgate SJ: Impact of Improved Local Control on Survival. *Int J Radiation Oncology Biol Phys*, Vol 12, p 453, 1985.
2. Cady B, MacDonald J, Gunderson L: Cancer of the Hepatobiliary System, *Cancer - Principles and Practice of Oncology*, DeVita VT, Jr, Hellman S, Rosenberg SA, (Eds), Philadelphia, Toronto, J B Lipincott Co, p 741-770, 1985.
3. Moertel CG: The Extrahepatic Bile Ducts Cancer, *Medicine*, p 1551-1556, Philadelphia, Lea & Febiger, 1973.
4. Bismuth H, Malt RA: Carcinoma of the Biliary Tract, *N Eng J Med*, Vol 301, p 704-706, 1979.
5. Kopelson G, et al: The Role of Radiation Therapy in Cancer of the Extrahepatic Biliary System, *Int J Radiation Oncology Biol Phys*, Vol 2, p 883-894, 1977.
6. Mittal B, Peutsch M, Iwatsuki S: Primary Cancers of the Extrahepatic Biliary Passages, *Int J Radiation Oncology Biol Phys*, Vol 11, p 849-854, 1985.
7. Green N, et al: Cancer of the Common Hepatic Bile Ducts - Palliative Radiotherapy, *Radiology*, Vol 109, p 687-689, December 1973.
8. Hanna S, Roder WD: Carcinoma of the Gallbladder or Extrahepatic Bile Ducts, The Role of Radiotherapy, *CMA Journal*, Vol 118, January 7, 1978.
9. Evander A, et al: Evaluation of Aggressive Surgery for Carcinoma of the Extrahepatic Bile Ducts, *Ann Surg*, Vol 191, p 23-29, 1980.
10. Koppelson G, et al: Patterns of Failure After Curative Surgery for Extrahepatic Biliary Tract Carcinoma: Implications for Adjuvant Therapy, *Int J Radiation Oncology Biol Phys*, Vol 7, p 413-417, 1981.
11. Moertel CG, *Cancer Medicine*, Holland JG, Frei E, III (Eds), p 1551, Philadelphia, Lea & Febiger, 1973.
12. Molt P, et al: Intraluminal Radiation Therapy in the Management of Malignant Biliary Obstruction, *Cancer*, Vol 57, p 536-544, 1986.
13. Pilepich MV, Lambert PM: Radiotherapy of Carcinoma of the Extrahepatic Biliary System, *Radiology*, Vol. 127, p 767-770, June 1978.
14. Todoroki T: The Late Effects of Single Massive Irradiation With Electrons of the Liver Hilum of Rabbits, *JPN J Gastroenterol Surg*, Vol 11, p 109, 1978.
15. Hishikawa Y, et al: Radiation Therapy of Carcinoma of the Extrahepatic Bile Ducts, *Radiology*, Vol 146, p 787-789, March 1983.

FRACTURE OF THE MONTH

Avulsion Fracture of the Patella with Quadriceps Rupture - A Frequently Missed Diagnosis

ACUTE loss of knee extension may be due to patella fracture or dislocation or to an avulsion and/or rupture of the quadriceps or patella tendons. Although usually considered a problem in patients over 40 years of age, quadriceps or patellar tendon ruptures can also occur in active young athletes.¹ The significance of the extensor disruption may not be recognized and the swelling attributed to ligamentous injury. Consequently, repair of the extensor apparatus can be delayed for several weeks or months with eventual compromise of the outcome. The present case illustrates that the diagnosis can be made by consistently evaluating any injured knee for loss of active extension. Also, when tendon ruptures occur in a young patient after minimal injury, one should consider the possibility of systemic causes underlying the problem.

Case Report

The patient was a 27 year old man with a 20 year history of insulin dependent diabetes and end stage renal disease. Three days prior to presenting in our orthopaedic clinic, he was walking up stairs and felt a sharp pain in the anterior aspect of his right knee. The knee swelled immediately and the patient noticed weakness and inability to put weight on the injured side. After three days of persistent symptoms he reported to our clinic. On physical examination he had considerable swelling in the knee and tenderness generalized throughout the knee joint. There was some localized tenderness in the suprapatellar region and a questionable defect in the quadriceps region. The patient held the right knee flexed at 40° and could not actively extend it. X-ray revealed a subtle bone fragment off the patella consistent with an avulsion of the quadriceps (Figure 1). In order to look for signs of systemic disorders underlying the problem, x-rays of the clavicle and hands were obtained which showed character-

JOHN F. CONNOLLY, M.D.

LYNN A. CROSBY, M.D.

From the Creighton-Nebraska Health Foundation
Program in Orthopaedic Surgery, 42nd & Dewey
Avenue, Omaha, NE 68105-1065.

istic erosive changes (Figures 2 & 3). Further laboratory data included phosphorus of 6.1 (2.2 to 4.5 mg/dl), calcium of 9.6 (8.5 to 10.5 mg/dl), and alkaline phosphatase 478 (42 to



Figure 1

Lateral view of right knee at time of initial presentation shows subtle avulsion fracture which belied the massive quadriceps injury.



Figure 2
X-ray shows subperiosteal resorption on radial aspect of the left middle phalanx of the 2nd and 3rd digits consistent with hyperparathyroidism.



Figure 3
AP view revealing bony resorption of lateral aspect of the clavicle consistent with hyperparathyroidism.

122 IU/1). The patient had been on chronic renal dialysis and with the history, physical exam, and laboratory results, the diagnosis of quadriceps tendon rupture secondary to chronic renal osteodystrophy and secondary hyperparathyroidism was confirmed.

Discussion

Any sudden loss of active knee extension should prompt immediate consideration of extensor mechanism disruption. The obvious diagnostic signs of tendon rupture may be hidden by the hematoma that accompanies the acute injury. Therefore, if the examiner does not have a suspicion, the diagnosis may be missed with surprising frequency on initial examination. This may occur as often as 30 to 40% in some reported series.² The results of early operation are definitely better than those of late repair. Consequently, it is essential that one test for the patient's ability to actively extend the knee after any trauma or swelling about the knee since not all swollen knees result from collateral or cruciate ligament disruption.

In addition, once the diagnosis is made, the possibility of underlying diseases should be considered, particularly if the injury was atraumatic. Diseases associated with tendon ruptures include systemic erythematosis, gouty arthritis, rheumatoid arthritis, long-standing diabetes mellitus, and particularly hyperparathyroidism.³ With increasing numbers of patients undergoing maintenance hemodialysis, the occurrence of quadriceps and other tendon ruptures from secondary hyperparathyroidism is definitely increasing. Colyer recently reported a 12% incidence of tendon ruptures in renal dialysis patients.⁴ Uncontrolled osteolysis due to secondary hyperparathyroidism (Figure 2 & 3) reduces the tendon tolerance to stress and weakens its insertion at the bone.⁵ Consequently, tendon ruptures should be considered a possibility in any patient on long-term hemodialysis who experiences sudden loss of joint function.

Management

The day following the diagnosis the patient was taken to the operating room where a massive avulsion of the quadriceps tendon was

reattached to the patella using wire suture. The repair proved quite stable when tested on the table, flexing the knee to 70°. Subsequently, the patient was started on a gentle range of knee motion on the second post-operative day. On the seventh post-operative day his knee was supported with a cylinder cast and he was discharged on crutches. Three weeks post-injury the cast was removed but knee immobilization in a splint was continued for an additional two months. During that time the patient was allowed a supervised exercise program. At follow-up three months after surgery, he was able to completely straighten his knee and hold it firmly against resistance. He has been cautioned to avoid vigorous activities which might stress and rupture tendons elsewhere in his body.

Conclusion

Avulsion fractures and tendon ruptures in patients on chronic renal dialysis appear to be increasing. It is essential that the diagnosis be made early when the rupture occurs. The results are significantly better with early repair. A high index of suspicion and careful examination of active quadriceps function is critical in all patients presenting with knee pain. This is especially true for patients with known systemic disease as well as for the elderly patient with sudden loss of joint function.

References

1. Kelly DN, Carter VS, Jobe FN: Patellar and Quadriceps Tendon Ruptures - Jumper's Knee. *Am J Sports Med* 12:375-380, 1984.
2. Siwek CW, Rao JP: Ruptures of the Extensor Mechanism of the Knee Joint. *J Bone and Joint Surg*, 63-A:932, 1981.
3. Connolly JF: *DePalma's Management of Fractures and Dislocations, Third Edition*. Philadelphia, W.B. Saunders Co., 1981, pp 1650-1658.
4. Colyer RA: Management of Orthopaedic Problems in Renal Dialysis and Transplant Patients, AAOS Annual Meeting, San Francisco, CA, 1987.
5. Cirincione, RJ, Baker BE: Tendon Ruptures with Secondary Hyperparathyroidism. *J Bone and Joint Surg*, 57-A:852, 1975.

President's Page

BUREAUCRATS KEEP TECHNOLOGY ON THE SLOW ROAD — FULL OF POT HOLES

It has always been true that government regulation fails to keep up with technical and scientific advances. This is undoubtedly proper, but we are at the present time, in the State of Nebraska, facing several problems which have been magnified because public policy makers have failed to act in a timely and constructive manner. This has produced a crisis which is costing lives and medicine is shackled by bureaucratic inactivity. Many of these problems are administrative problems, but if the legislature were to not abdicate their responsibility but instruct the administrative departments as to the legislature's desires these administrative faux pas would not exist. There is too much legislation accomplished by rules and regulations.

Recently, in this state, we have had the prosecution of a nurse on the basis of failure to follow her scope of practice in the State of Nebraska. The scope of practice in the State of Nebraska is so poorly defined that in order for anyone to follow it, they would need to ask the Board of Nursing "Mother, may I?" before they carried out any new procedure. Because of the prosecution of this nurse, our patients are suffering. Nurses in the extremely sensitive specialized care areas such as intensive care units, coronary care units, burn units, intensive neonatology units, transplant services, are not able to take care of these patients to the level that their skills would permit them to do. In addition to the nurses being afraid to carry out care that they have been trained to do under the protocols provided by their physicians, some of the hospitals are not permitting these nurses in these areas to carry out these duties that they have been so thoroughly trained to do all under the protocol provided by the physicians in the various areas. An anecdotal example will clarify what I mean. In one of the local hospitals in a neonatology unit, a newborn on a ventilator developed bilateral pneumothorax. Previous to the above-mentioned prosecution, the nurses would have simply aspirated the bilateral pneumothorax



L. Dwight Cherry, M.D.

and the baby would have been fine. They did not dare do this, they called the physician who just happened to be in his car when the pager went off, he was in the hospital in less than 10 minutes and aspirated this baby's chest, and the baby is fine. What would have been the result had he been home in bed or not been carrying his beeper? The same sort of scenario could be described for intensive care units, particularly those handling trauma or coronary care units including those handling heart surgery patients. It is indeed frightening.

Another area that needs to be clarified is the matter of life support or frequently, more correctly defined as death prolonging. Many patients are continued on life support measures even though the outcome is hopeless and even though the family and patient may not desire it. Sometimes this is due to the fact that the physician fears professional liability suits, sometimes it is due to the fact that the patient is in this position because of some criminal action such as drunk driving and the attorneys for the prosecution and for the hospital will strongly urge that life support systems be continued because the defense attorney will use this as a defense of his client saying that "the physician killed the patient," not my client, even though his client may have been drunk or negligent or engaging in some criminal activity such as shooting the patient.

It seems like in recent times that everybody has become an ethicist. Certainly ethics is an extremely important part of these decisions and which must be jointly made with physicians first, family and patient second, and clergy thirdly. The area of living wills needs to be clarified.

The Legislature certainly needs to clear up a number of areas that are unclear in the eyes of the law, dealing with many areas of human reproduction. The state should in no way interfere with one's personal and religious beliefs but needs to clear up the element of

legality or nonlegality of items such as extra-uterine fertilization, embryo transplants, artificial insemination, and surrogate mothering. These are all items that are extremely nebulous in the eyes of the law.

Now I come to the very frustrating portion of this President's Page. I have no good suggestions for solutions. The only two suggestions I have are to continue to put pressure on our policy makers by letters and at the polls.

L. Dwight Cherry, M.D.
President



The Auxiliary

PRESIDENT'S REPORT . . .

Community seminars, lifestyle tours, and fundraising coffees are just a few of the projects that your officers learned about during our recent visits to county auxiliaries and members-at-large in out-state Nebraska.

Desta Osborne, President-Elect, and Sally Becker, First Vice President, accompanied me to North Platte, Ogallala, Alliance and Scotts-bluff. Desta and I also visited members-at-large in Beatrice. We were impressed at each gathering with the enthusiasm and varied interests of our members. With so many active in the work force and community volunteer programs, we were pleased that they continue to support the Auxiliary and its projects.

The Fall Board Meeting in Grand Island was attended by over forty members. Those

present heard an update on Health Projects, AMA-ERF, NMF, Membership, Legislation, as well as the activities of our county auxiliaries. A new project, the **MEDI-FILE CARD**, was introduced by Penny Keim. Watch your mail and read your Newsletters for more information on these Auxiliary happenings.

During the luncheon break, Dr. Robert Manley, historian and former Professor at the University of Nebraska, entertained and enlightened us with a historical review of Nebraska Medicine and Physicians.

Your officers are looking forward to visiting the remaining Auxiliaries. Please keep us informed of your activities.

Colleen Adam,
President, NMAA

HEALTH PROJECTS

Seat Belts

In August of this year 78% of the traffic fatalities were not wearing seatbelts. As the spouse of a surgeon who does lots of trauma care, the lament "if only that pretty 18 year old would have been wearing her seatbelt . . ." is heard often. The AMA Auxiliary is serving as prime distributor of a kit of material on seatbelt usage that has been produced by General Motors and the AMA. The program discounts the myths people believe about seatbelt use, particularly in regard to pregnant women, infants, and young children. To order the free kits, write Seatbelt Safety, Box 528, Prospect Heights, IL 60070, specifying what size videotape you need: VHS, $\frac{3}{4}$ ", or Beta. There is no limit on the number of kits you can order.

In Lancaster County I have placed the kits with a General Motors dealer, two hospitals and made it available to our members.

Nebraska Traffic Safety Now, Box 95147, Lincoln, NE 68509, has contacted me regarding our help in the petition drive to put the seatbelt law back on the ballot. They have people available for speakers across the state.

Auxilians, lets use that video and buckle up. A 78% fatality rate for non use is too high a price to pay. It's not good health!

Linda Paul,
Seatbelt Chairman

CREIGHTON UNIVERSITY MEDICAL CENTER NEWS

C.U. OSTEOPOROSIS RESEARCHERS GET MULTIMILLION DOLLAR GRANT

The Creighton University Medical Center has been awarded a \$3.82 million grant by the National Institutes of Health (NIH) to establish a Specialized Center of Research in Osteoporosis.

The grant was announced by the office of U.S. Rep. Hal Daub, R-Neb.

The grant includes first-year funding totaling \$746,133. In addition, Creighton is scheduled to receive an additional \$3,069,629 over the following four-year period.

Creighton competed against 14 other major medical centers for the federal dollars. Creighton was one of three medical centers to be awarded grants.

Creighton's long-standing reputation in osteoporosis research was one reason why the medical center was awarded its grant, an NIH official said.

"There were some very high-powered medical centers with good reputations in osteoporosis research that applied for the grants," commented Dr. Stephen L. Gordon, director of the NIH musculoskeletal diseases program.

"I think Creighton's selection is clearly a statement that we were impressed with the (osteoporosis) investigative team at Creighton and particularly with the research projects they proposed undertaking," in the grant application," he said.

In addition to Creighton, the University of Pennsylvania in Philadelphia and Helen Hayes Hospital in West Haverstraw, N.Y., were awarded NIH grants to establish osteoporosis research centers.

Creighton already is internationally recognized for its contributions to research in osteoporosis, a skeletal disorder characterized by bone fractures. Postmenopausal women are the most common victims, although osteoporosis also can affect men and other women.

The NIH grant will continue to enhance Creighton's reputation in osteoporosis research, said Dr. Robert Recker, director of Creighton's Center for Hard Tissue Research.

Dr. Recker also will serve as program director for the NIH-funded research center.

"The significance of this grant is hard to overestimate," Dr. Recker said. "This size of grant will allow us to generate some very important data on osteoporosis. The results of three of our projects could very well directly impact the treatment of osteoporosis."

The NIH grant will fund seven Creighton research projects involving the medical center's top four osteoporosis researchers. The seven projects will join nine other current or pending projects.

The areas of osteoporosis to be studied under the NIH grant and the principal investigators are:

— Bone restoration. This project will test a method of restoring lost bone in postmenopausal women who have low bone mass. The method involves activating the skeleton to speed up its bone formation while at the same time suppressing bone removal.

To date, no safe and effective method of restoring lost bone is known. Finding a means to restore lost bone is considered to be the ultimate goal among osteoporosis researchers, according to Dr. Recker. Dr. Recker is the principal investigator.

— Heredity's role in osteoporosis. This study will investigate the role that genetics play in the development of osteoporosis by studying rates of change in bone loss during premenopausal and postmenopausal periods.

Bone-density measurements will be made in female family members of osteoporotic patients to determine whether the patient's daughters and sisters are prone to developing osteoporosis. Dr. J. Christopher Gallagher is the principal investigator.

— Changes in bone-cell physiology that occur during and following menopause. The project will look at healthy, premenopausal women over age 49, who will undergo bone biopsies before and after menopause to measure changes in bone-cell function which

occur after bone is lost. Dr. Recker is the principal investigator.

— The effect of estrogen and diet on bone-cell function and bone loss. Creighton researchers will examine the effect of calcium intake and other dietary factors on bone-cell activity and bone loss. Ovariectomized rats will be used in the studies. Dr. Donald Kimmel is the principal investigator.

— Identification and treatment of calcium deficiency. Researchers will look for a method of identifying women whose bodies are not absorbing or retaining sufficient amounts of calcium. They then will test whether calcium supplementation of these women's diets inhibits bone loss.

There currently is no accepted means of recognizing calcium deficiency, which has

impeded medical research in the area of calcium nutrition, according to Dr. Robert Heaney. Dr. Heaney is the principal investigator.

— Calcium bioavailability from plants. The purpose of this study is to determine which plants are good sources of calcium as well as which plants may interfere with the body's absorption of calcium from other food sources. As examples, the oxalic acid found in spinach and fiber in wheat can interfere with calcium absorption. Dr. Heaney is the principal investigator.

— Effect of strength-training programs on bone density. This study will investigate whether strength training of the muscles of the spine and hip will increase bone mass for women between the ages of 25 and 35. Dr. Gallagher is the principal investigator.

Coming Meetings

NMA ANNUAL SESSION — April 29-May 2, 1988, Omaha Marriott.

NMA FALL SESSION — September 22-24, 1988, Cornhusker Hotel.

UPCOMING CME COURSES

GERONTOLOGY PROGRAM — November 13, 1987, Omaha, Nebraska

34TH SCIENTIFIC SESSION - NEBRASKA OB/GYN SOCIETY — December 3-6, 1987, Bally's, Las Vegas, Nevada

8TH ANNUAL MEDICAL SKI CONFERENCE — February 21-25, 1988, Keystone Colorado

8TH ANNUAL ENT SKI CONFERENCE — March 5-11, 1988, Keystone Lodge, Colorado

DRUG THERPY CIRCUIT COURSE — March 16, 1988, Holiday Inn, Hastings, Nebraska

FAMILY PRACTICE REVIEW — April 18-29, 1988, Omaha, Nebraska

FAMILY PRACTICE REVIEW — May 9-20, 1988, Omaha, Nebraska

INTERNATIONAL SYMPOSIUM ON INFLAMMATORY HEART DISEASE — July 27-31, 1988, Snowmass, Colorado

CARDIOVASCULAR DISEASE PREVENTION IN THE YOUNG AND ADULT — July 31-August 3, 1988, Snowmass, Colorado

EMERGENCY MEDICINE REVIEW—September 19-24, 1988, Omaha, Nebraska

EMERGENCY MEDICINE REVIEW — October 3-8, 1988, Omaha, Nebraska

To register and for further information contact: Marge Adey or Brenda Ram, Center for Continuing Education, University of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, Nebraska 68105. Telephone (402) 559-4152.

CREIGHTON UNIVERSITY

RECENT DEVELOPMENTS IN INFECTIOUS DISEASES — Nov. 25-Dec. 15, Grand Cayman Island. 18 credit hours.

CURRENT CONCEPTS IN CARDIOLOGY — Dec. 4, Room 6712 Health Professions Center, Saint Joseph Hospital, Omaha, NE. Fee: TBA. Hours: TBA. The program is designed to present recent advances in diagnostic methods and therapeutic approaches in cardiology.

UNDERSTANDING AIDS — Dec. 11-12, Red Lion Inn, Omaha, NE. 13 credit hours. Designed to present updated information for professionals caring for men, women and children who may have HIV infection. Fee: \$100.

RECENT DEVELOPMENTS IN INFECTIOUS DISEASES — Jan. 1-Mar. 26, 1988, Kona Coast, HI. 24 credit hours.

ESOPHAGEAL DISORDERS — Feb. 17-24, 1988, Great Bay Beach Hotel, St. Maarten. 24 credit hours. Designed to give a didactic course to a small group of select surgeons who are interested in studying detail surgical diseases of the esophagus. Fee: \$475.00.

THE FLORIDA TUTORIAL — Apr. 7-8, 1988, Orlando Airport Marriott, Orlando, FL. Fee: TBA. Hours: TBA. This annual program is a commitment to resident education and brings together leading specialists in OB/GYN to present current advances in the field.

SYMPOSIUM ON INFECTIOUS DISEASES — Apr. 15, 1988, Boys Town National Institute Auditorium, Saint Joseph Hospital, Omaha, NE. Advances in infectious disease. Fee: TBA. Hours: TBA.

FAMILY MEDICINE UPDATE — May 27-29, 1988, The Lodge at Okoboji, IA. Fee: TBA. Hours: TBA.

PERINATAL INFECTIONS — June 3-4, 1988, Marriott Hotel, Omaha, NE. Fee: TBA. Hours: TBA. This regional meeting

will bring together national experts to discuss various topics in perinatal infection.

SIXTH ANNUAL MAURICE E. GRIER SYMPOSIUM (OB/GYN) — June 11, 1988, Marriott Hotel, Omaha, NE. This program centers around presentations by outgoing residents in the field of OB/GYN. Hours: TBA. Fee: TBA.

VISITING PROFESSOR SCHEDULE

DR. JOHN CAMERON — Was scheduled for September, 1987, postponed until March, 1988. Dr. Cameron is Surgeon-in-Chief, The John Hopkins University, Department of Surgery, Baltimore, Maryland.

For further information or to register, contact: Creighton University School of Medicine Division of CME, Omaha, NE 68178, 402-280-2550 or outside Nebraska toll free 800-228-7212, Ext. 2550. The Creighton University School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.

LANCASTER COUNTY MEDICAL SOCIETY

"CLINICAL UPDATE-III" PROGRAM SHEET — Saturday, November 14, 1987. Sponsored by the Lancaster County Medical Society, Bryan Memorial Hospital, Lincoln

General Hospital and St. Elizabeth Community Health Center. There will be a variety of topics with many different doctors covering each topic. Located at the Nebraska Center for Continuing Education, 33rd & Holdrege Street, (Phone 472-3435) Lincoln, Nebraska. There is no registration fee, but to obtain a registration form contact: P.D. Duensing, Ed.D., Executive Secretary, Lancaster County Medical Society 2966 "O" Street, Lincoln, NE 68510.

NATIONAL JEWISH CENTER FOR IMMUNOLOGY AND RESPIRATORY MEDICINE

NATIONAL JEWISH CENTER FOR IMMUNOLOGY AND RESPIRATORY MEDICINE KEYSTONE SUMMIT — February 3-7th, 1988 at Keystone Colorado. A tribute to: Richard Farr, M.D. Topics: Allergy, Asthma, Pharmacology, Advances in Immunology, Diagnostic Testing and more. Registration fee: \$325.00 — \$165.00 for Allied Health and Physicians in Training. 16.5 hours of AMA Category 1 Credit. For brochure and more information contact: Jeri Wagner, National Jewish Center for Immunology and Respiratory Medicine, 1400 Jackson Street, Denver, CO 80206, 303-398-1000.

Picture Gallery

NEBRASKA MEDICAL ASSOCIATION

1987
Fall Session



Doctor L. Dwight Cherry, President, presents Executive Director, William L. Schellpeper, a plaque recognizing 25 years of distinguished service to the Association.



Doctor Gregg F. Wright addresses the House of Delegates.



Doctor F. William Karrer provides a status report on the Nebraska Cancer Registry.



Doctor Richard H. Meissner, Speaker, presiding over the House of Delegates.



Ms. Sally Wood, Blue Cross/Blue Shield of Iowa, addresses the House of Delegates.



Doctor Paul E. Collicott reports to the House on non-dues income generated by the Association.



Reference Committee #1 in session.



Reference Committee #2 in session.



Reference Committee #3 in session.



Reference Committee #4 in session.



Reference Committee #5 in session.



Reference Committee #6 in session.



Doctor James H. Dunlap discusses professional liability in the House of Delegates.



Doctor L. Dwight Cherry, President, discusses an issue before Reference Committee #1.



Doctor Stanley R. Shane, University of Nebraska College of Medicine, reports to the House of Delegates.



Doctor Alan Fruin, Creighton University School of Medicine, reports to the House of Delegates.



Doctor Harry McFadden, Vice-Speaker Pro Tem, presides over the House of Delegates.



Doctor A. H. Bergman presents the report of Reference Committee #1.



Doctor Jon Hinrichs presents the report of Reference Committee #4.



Doctor Stanley F. Nabity presents the report of Reference Committee #2.



Doctor John F. Fitzgibbons presents the report of Reference Committee #5.



Doctor George Voigtlander presents the report of Reference Committee #3.



Doctor Allen D. Dvorak presents the report of Reference Committee #6.

AMA News Notes

(continued from page 14-A)

year. Instead, it decided to forego a needed \$2.90 increase in premiums and spend down its Medicare trust fund assets. If the full 1987 premium had been imposed, current premiums would be \$19.30 a month rather than \$17.90 and the projected \$24.80 premium for 1988 would not be as dramatic.

Dr. Todd noted that physicians fees have been held down for several years by widespread physician participation in a voluntary fee freeze, Congressionally-imposed reimbursement and fee freezes and by a new federally-mandated control, Maximum Allowable Actual Charges (MAACs).

He assured members of the Committee that the AMA has seen no evidence that improper increases in utilization or intensity inappropriately "caused" by physicians. "If there were," he said, "the AMA would be at the forefront of efforts to address such a problem."

Physicians have been scrupulous in their dealings with the Medicare program. This has been confirmed by HHS-ordered study conducted by Peter D. McMenamin, Ph.D., an economist. Dr. McMenamin's draft report has indicated that the increase in intensity of Medicare services does not reflect fraudulent or improper changes in billing practices.

There are several plausible reasons for the increase in utilization and intensity, he has concluded. Among them are:

- The growth and aging of Medicare population.
- Maintaining the deductible at the level set in 1981.
- Wide acceptance of assignment.
- Holding down charges.
- A decline in costs of office visits in terms of relative practicing.

Additionally, Dr. Todd noted, a recently completed Rand Health Insurance Experiment

has concluded that a reduction in beneficiary cost-sharing for service leads to an increase in the volume of services used. Approximately 70% of the Medicare population is covered by private "Medigap" policies that effectively provide first-dollar coverage of the deductible and coinsurance. Increased utilization by beneficiaries as a result of lower real out-of-pocket costs is not unexpected, Dr. Todd said.

The price of physician services increased at a slower rate than other sectors of the economy in August, according to an AMA analysis of the latest Consumer Price Index (CPI) figures.

For the third time this year, the cost of going to a physician fell below the overall inflation rate, said analysts from the AMA's Center for Health Policy Research. The center looked at CPI figures released Sept. 23 by the Bureau of Labor Statistics.

In its analysis of the CPI, the center reported that the overall inflation rate for August was 5.9%, with the price of all commodities increasing 4.2% and the price of all services increasing 8%.

But the CPI's Medical Care Index, which includes physicians' services, prescription drugs, and hospital room costs, increased at a 3.9% rate in August. The annualized rate for the period August, 1986, to August, 1987, was 6.6%.

For physicians' services, the inflation rate for August was 4.5%. According to the center report, the price of physicians' services also dipped below the overall inflation rate in January and February. Year-to-date figures, however, indicate that there is an increase in the price of physicians services of 1.3%, compared with the CPI's All-Services component.

AMA News Notes

UPDATE ON MEDICARE LITIGATION

Following are developments regarding the AMA's involvement in Medicare litigation on behalf of the profession:

- (1) AMA expects to hear in October whether the Supreme Court will take the Massachusetts Mandatory Assignment case.
- (2) AMA has filed its notice of appeal in the Dallas MAAC litigation. It will appeal the judge's finding that the process by which HHS implemented the MAAC program was fair, reasonable and constitutional. Trial on the constitutionality of the MAAC itself will be deferred pending the appeal and other legal developments.
- (3) On Sept. 11 AMA filed an amicus brief in support of the New York State Ophthalmological Society and the California Association of Ophthalmology challenging the constitutionality of a provision of COBRA which restricts the patient's right to contract for surgical assistance in cataract operations. The precise issue is whether Congress may constitutionally prevent Medicare patients from using their own private funds to purchase a lawful medical service which the patient has determined, in consultation with a qualified physician, to be in the patient's best interest.

OWNERSHIP, MANAGEMENT AND CIRCULATION STATEMENT

Owned by The Nebraska Medical Association, 1512 First-Tier Bank Building, Lincoln, Nebraska 68508.

Business Manager: William Schellpeper, same address as above.

Editor: Alan D. Forker, M.D., 5505 Ellendale Road, Lincoln, NE 68510

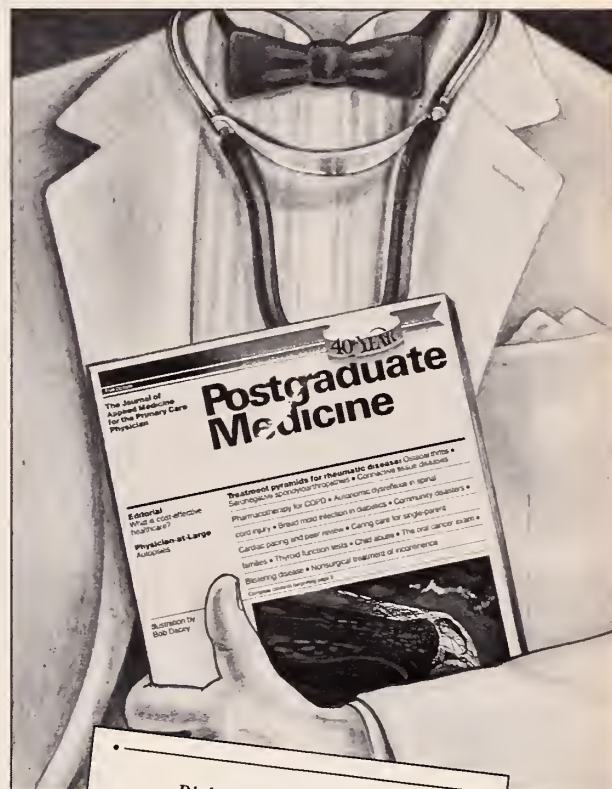
Printed monthly by Norfolk Printing Company, 118 North Fifth Street, Norfolk, Nebraska 68701.

There are no known bondholders, mortgages, or other security holders.

The percentage of advertising does not exceed 60%.

Average number of copies distributed monthly to subscribers by mail in the year, 1906.

FAMOUS PHYSICIANS ARE SHOWING UP FOR OUR 40th YEAR CELEBRATION.



Richard D. deShazo, M.D.
Max Samter, M.D.
Roy J. Gerard, M.D.
Joseph A. Scoma, M.D.
Eugene P. Salvati, M.D.
Richard A. King, M.D.

Read Every Issue From Cover to Cover:

October

Symposium: Allergy Richard D. deShazo, M.D.
Coordinator

Special Article: Allergy 1947-1987 Max Samter, M.D.

November 1

Symposium: Focus on Family Practice Roy J. Gerard, M.D.
Coordinator

November 15

Symposium: Colon & Rectal Disease Joseph A. Scoma, M.D.
Coordinator

Special Article: Colon & Rectal Disease 1947-1987 Eugene P. Salvati, M.D.

December

Symposium: Genetic Diseases

Special Article: Genetics 1947-1987 Richard A. King, M.D.

40-YEAR
**Postgraduate
Medicine**

Every Issue is a Celebration of Clinical Information

Nebraska Medical Association Officers and Commissions

OFFICERS

L. Dwight Cherry, M.D., Lincoln..... President
C. A. McWhorter, M.D., Omaha..... President-Elect
Robert F. Shapiro, M.D., Lincoln..... Secretary-Treasurer
William L. Schellpeper, Lincoln..... Executive Director
James K. Ruigh, Lincoln..... Assistant Executive Director

AMA Delegates — **C. J. Cornelius, Jr., M.D., Sidney;**
John D. Coe, M.D., Omaha; **Louis J. Gogela, M.D.,**
Lincoln; **Blaine Y. Roffman, M.D., Omaha.**

BOARD OF DIRECTORS

L. Dwight Cherry, M.D., Kearney..... Chairman
C. A. McWhorter, M.D., Omaha..... Vice-Chairman
Robert F. Shapiro, M.D., Lincoln..... Secretary-Treasurer
Hiram R. Walker, M.D., Kearney..... Past President
Paul E. Collicott, M.D...... Lincoln
Richard A. Raymond, M.D...... O'Neill
Donald J. Pavelka, M.D...... Omaha
Richard H. Meissner, M.D...... Omaha
Harry R. McFadden, M.D., ProTem..... Omaha
C. T. Frerichs, M.D...... Beatrice

COMMISSION ON ASSOCIATION AFFAIRS

Harry W. McFadden, M.D., Chairman..... Omaha
R. A. Blatny, M.D...... Fairbury
Stuart P. Embury, M.D...... Holdrege
Joel T. Johnson, M.D...... Kearney
Bernard L. Kratochvil, M.D...... Omaha
Walter O'Donohue, M.D...... Omaha
Herbert E. Reese, M.D...... Lincoln
Joseph E. Stutcher, M.D...... Lincoln
R. C. Weldon, M.D...... Nebraska City

SCIENTIFIC SESSIONS COMMITTEE

Sushil S. Lacy, M.D., Chairman..... Lincoln
Mark A. Christensen, M.D., Convention Chairman..... Omaha
David L. Bacon, M.D...... Kearney
Robert A. Beer, M.D...... Omaha
Mark A. Christensen, M.D...... Omaha
Richard A. Hranac, M.D...... Kearney
Donald J. Larson, M.D...... Lincoln
Richard M. Tempero, M.D...... Omaha
Donald E. Waltemath, M.D...... Lincoln
Rick J. Windle, M.D...... Lincoln
Richard S. Yates, M.D...... Lincoln
Eugene M. Zweiback, M.D...... Omaha

COMMISSION ON MEDICAL SERVICES

William L. Rumbolz, M.D., Chairman..... Omaha
Carl J. Cornelius, Jr., M.D...... Sidney
Richard A. Hranac, M.D...... Kearney
F. William Karrer, M.D...... Omaha
Dale E. Michels, M.D...... Lincoln
Merton Quaife, M.D...... Omaha
Kenton L. Shaffer, M.D...... Kearney

AD-HOC COMMITTEE ON MATERNAL & CHILD HEALTH

Kenton L. Shaffer, M.D., Chairman..... Kearney

Section on Maternal Mortality Review

George M. Adam, M.D...... Hastings
James G. Cummins, M.D...... Omaha
L. Palmer Johnson, M.D...... Lincoln
Gary D. Milius, M.D...... Lincoln
William F. Rayburn, M.D...... Omaha
William L. Rumbolz, M.D...... Omaha
Larry Wilson, M.D...... Gothenburg

Section on Perinatal Mortality Review

Lawrence C. Bausch, M.D...... Lincoln
Stacie R. Bleicher, M.D...... Lincoln
Robert M. Nelson, M.D...... Omaha
Gregg F. Wright, M.D...... Lincoln

AD-HOC COMMITTEE ON GERIATRICS

Richard A. Hranac, M.D., Chairman..... Kearney
Ronald L. Asher, M.D...... North Platte
James Carraher, M.D...... Lincoln
J. Whitney Kelley, M.D...... Omaha
Jane F. Potter, M.D...... Omaha
Richard Thompson, M.D...... Lincoln
John A. Ursick, M.D...... Omaha
Vernon G. Ward, M.D...... Omaha

AD-HOC COMMITTEE ON ALTERNATE HEALTH PLANS

Dale E. Michels, M.D., Chairman..... Lincoln
Lonnie S. Albers, M.D...... Lincoln
Vernon F. Garwood, M.D...... Lincoln
Robert L. Haag, M.D...... Lincoln
Michael J. Haller, M.D...... Omaha

Roger D. Mason, M.D...... Omaha
Margaret A. Moravec, M.D...... Lincoln
Richard H. Meissner, M.D...... Omaha
Dwayne J. Peetz, Jr., M.D...... Omaha
Layton F. Rikkers, M.D...... Omaha
Sebastian J. Troia, M.D...... Omaha

COMMITTEE ON HEALTH PLANNING

Carl J. Cornelius, Jr., M.D., Chairman..... Sidney
Gordon D. Adams, M.D...... Norfolk
Lewiston W. Birkmann, M.D...... Lincoln
James S. Carson, M.D...... McCook
Chris C. Caudill, M.D...... Lincoln
Allen D. Dvorak, M.D...... Omaha
Dale W. Ebers, M.D...... Lincoln
Louis J. Gogela, Jr., M.D...... Beatrice
Roger D. Mason, M.D...... Omaha
Donald F. Prince, M.D...... Minden
C. Lee Retelsdorf, M.D...... Omaha
Thomas H. Wallace, M.D...... Gordon

AD-HOC COMMITTEE ON TUMOR REGISTRY

F. William Karrer, M.D., Chairman..... Omaha
Elvin G. Brown, M.D...... Hastings
John H. Casey, M.D...... Lincoln
James R. Commers, M.D...... Omaha
Sushil S. Lacy, M.D...... Lincoln
Donald R. Owen, M.D...... Omaha
C. Lee Retelsdorf, M.D...... Omaha
Ron D. Scott, M.D...... Kearney

AD-HOC COMMITTEE ON LOW LEVEL RADIATION WASTE DISPOSAL

Merton A. Quaife, M.D., Chairman..... Omaha
Prentiss M. Dettman, M.D...... Lincoln
Allen D. Dvorak, M.D...... Omaha
David J. Hoelting, M.D...... Pender
Ernest O. Jones, Ph.D...... Omaha
Martin R. Lohff, M.D...... Omaha
W. E. Lundak, M.D...... Lincoln
William H. Northwall, M.D...... Kearney
Jerald R. Schenken, M.D...... Omaha

COMMISSION ON LEGISLATION AND GOVERNMENTAL AFFAIRS

Ronald L. Klutman, M.D., Chairman..... Columbus
Robert G. Osborne, M.D., Vice-Chairman..... Lincoln
Rodney S. W. Basler, M.D...... Lincoln
James H. Dunlap, M.D...... Norfolk
Dale W. Ebers, M.D...... Lincoln
Richard D. Fitch, M.D...... O'Neill
Vernon F. Garwood, M.D...... Lincoln
Charles Gregorius, M.D...... Lincoln
Bruce W. Henricks, M.D...... Fremont
Barbara M. Heywood, M.D...... Papillion
Mark R. Hutchins, M.D...... Lincoln
Max W. Linder, M.D...... Lincoln
Ann E. Lott, M.D...... Lincoln
William R. Marsh, M.D...... Grand Island
John T. McGreer, III, M.D...... Lincoln
Dennis G. O'Leary, M.D...... Omaha
George W. Orr, M.D...... Omaha
Dwayne J. Peetz, M.D...... Neligh
Herbert E. Reese, M.D...... Lincoln
C. Lee Retelsdorf, M.D...... Omaha
Blaine Y. Roffman, M.D...... Omaha
Jerald R. Schenken, M.D...... Omaha
Todd S. Sorensen, M.D...... Scottsbluff
Richard B. Svehla, M.D...... Omaha
Timothy O. Wahl, M.D...... Omaha

AD-HOC COMMITTEE ON HEALTH POLICY STATEMENTS

C. Lee Retelsdorf, M.D., Chairman..... Omaha
Daniel S. Durrie, M.D...... Omaha
Joel T. Johnson, M.D...... Kearney
Darroll J. Loschen, M.D...... York
Dale E. Michels, M.D...... Lincoln
Stanley F. Nabity, M.D...... Grand Island
John F. Porterfield, M.D...... Lincoln
Gerald Rounsberg, M.D...... North Platte
Charles S. Wilson, M.D...... Lincoln

AD-HOC COMMITTEE ON PROFESSIONAL LIABILITY

James H. Dunlap, M.D., Chairman Norfolk
David L. Bacon, M.D. Kearney
Warren G. Bosley, M.D. Grand Island
Ernest W. Chupp, M.D. Omaha
F. M. Gawecki, M.D. Papillion
Dwaine J. Peetz, M.D. Neligh
Richard M. Pitsch, Jr., M.D. Lincoln
Herbert E. Reese, M.D. Lincoln
Blaine Y. Roffman, M.D. Omaha

COMMISSION ON MEDICAL EDUCATION

Frederick F. Paustian, M.D., Chairman Omaha
Robert L. Bass, M.D. Elkhorn
Warren G. Bosley, M.D. Grand Island
Patrick E. Brookhouser, M.D. Omaha
Charles F. Damico, M.D. Hastings
Charles A. Dobry, M.D. Omaha
A. Dean Gilg, M.D. Lincoln
William E. Lundak, M.D. Lincoln
Richard L. O'Brien, M.D. Omaha
Dwaine J. Peetz, Jr., M.D. Omaha
Joseph C. Scott, M.D. Omaha
Robert H. Waldman, M.D. Omaha

AD-HOC COMMITTEE ON HEALTH EDUCATION & ATHLETIC MEDICINE

Warren G. Bosley, M.D., Chairman Grand Island
Patrick E. Clare, M.D., Vice-Chairman Lincoln
Joseph R. Ellison, M.D. Omaha
Richard W. Hammer, M.D. Lincoln
Richard E. Jackson, M.D. Pawnee City
Stephen J. Lanspa, M.D. Omaha
Morris B. Mellon, M.D. Omaha
Paul H. Phillips, M.D. Scottsbluff
Richard A. Raymond, M.D. O'Neill
Eileen C. Vautravers, M.D. Lincoln
Hobart E. Wallace, M.D. Lincoln
Wesley G. Wilhelm, M.D. Omaha
Gregg F. Wright, M.D. Lincoln

COMMISSION ON PUBLIC AFFAIRS

Rodney S. W. Basler, M.D., Chairman Lincoln
H. Jeffrey Deeths, M.D. Omaha
Herbert D. Feidler, M.D. Norfolk
Edward E. Gatz, M.D. Omaha
Donald T. Glow, M.D. Omaha
John J. Hoelsing, M.D. Omaha
Roger P. Massie, M.D. Plainview
Donald E. Matthews, M.D. Lincoln
Harlan C. Shriner, M.D. Lincoln
F. Thomas Waring, M.D. Fremont

COMMISSION ON HOSPITAL MEDICAL STAFF

Glen F. Lau, M.D., Chairman Lincoln
Charles Heider, Jr., M.D. North Platte
Harry E. Keig, M.D. Papillion
Barney B. Rees, M.D. Omaha
Joseph G. Rogers, M.D. Lincoln
Larry D. Ruth, M.D. Lincoln
Steven A. Schwid, M.D. Omaha
Jerry K. Seiler, M.D. Hastings
William A. Shiffermiller, M.D. Omaha
Stephen D. Torpy, M.D. Omaha

AD-HOC COMMITTEE ON HEALTH GALLERY

Russell L. Gorthey, M.D., Chairman Lincoln
Warren G. Bosley, M.D. Grand Island
Glen F. Lau, M.D. Lincoln
Richard C. Olney, M.D. Lincoln
John L. Reed, M.D. Lincoln
Stanley M. Truhlsen, M.D. Omaha

AD-HOC COMMITTEE ON YOUNG PHYSICIANS

Richard A. Raymond, M.D., Chairman O'Neill
Gary W. Barth, M.D. Hastings
John I. Cherry, M.D. Lincoln
Norman Grosbach, M.D. Omaha
Herbert A. Hartman, Jr., M.D. Omaha
Katherine A. Keifer, M.D. Kearney
Jeanette L. Masek, M.D. Lincoln
Kirk B. Muffly, M.D. Omaha
Timothy P. O'Holleran, M.D. North Platte
Mark D. Pilley, M.D. Omaha
Bradley D. Rodgers, M.D. Holdrege
William A. Shiffermiller, M.D. Omaha
Vincent J. Sutton, M.D. Hastings

NMA PRO OVERVIEW COMMITTEE

M. Jack Mathews, M.D., Chairman Lincoln
David Bacon, M.D. Kearney
Steven T. Bailey, M.D. Omaha
A. H. Bergman, M.D. Fremont
Dennis M. Connolly, M.D. Lincoln
Carl J. Cornelius, Jr., M.D. Sidney
Richard A. Cottingham, M.D. McCook
Francis D. Donahue, M.D. Omaha
Daniel S. Durrie, M.D. Omaha
John F. Fitzgibbons, M.D. Omaha
C. T. Frerichs, M.D. Beatrice
Gordon J. Hrnicek, M.D. Grand Island
Frederick F. Paustian, M.D. Omaha
Richard A. Raymond, M.D. O'Neill
Herbert E. Reese, M.D. Lincoln

AD-HOC COMMITTEE RE: BLUE SHIELD OF IOWA-MEDICARE

Paul E. Collicott, M.D., Chairman Lincoln
R. A. Rlatny Fairbury
Steve Brase Lincoln
Thomas M. Connors, M.D. Omaha
Bob Gallion Lincoln
Vernon Garwood, M.D. Lincoln
Roger Massie, M.D. Plainview
Mrs. Janice Olson Lincoln
Donald Pavelka, M.D. Omaha
Richard B. Svehla, M.D. Omaha
Hiram R. Walker, M.D. Kearney

AD-HOC COMMITTEE ON MEDICAID SERVICES

Chris C. Caudill, M.D., Chairman Lincoln
Judith A. Butler, M.D. Superior
Dale W. Ebers, M.D. Lincoln
Russell L. Gorthey, M.D. Lincoln
Roger A. Jacobs, M.D. Seward
Ronald Klutman, M.D. Columbus
Harold M. Nordlund, M.D. York
Richard B. Svehla, M.D. Omaha
M. Allen Tompkins, M.D. Grand Island

NMA TASK FORCE ON AIDS

Monte M. Scott, M.D., Chairman Lincoln
Samuel E. Boon, M.D. Lincoln
Robert C. Rosenlof, M.D. Kearney
Philip W. Smith, M.D. Omaha
Scot C. Sorensen, M.D. Lincoln

NEBRASKA MEDICAL ASSOCIATION

Dates to Remember

120th Annual Session
April 29-May 2, 1988

1988 Fall Session
September 22-24, 1988

Physicians' Classified

Advertisements in this column are run at the rate of \$15.00 per insertion, for an advertisement of 50 words or less. An additional charge of 25¢ per word will be assessed for advertisements exceeding the 50-word limit. Copy must be received by the fifth of the month preceding the date of publication. Each advertisement will be removed following its first appearance unless otherwise instructed. If desired, advertisers may utilize a box number in care of THE NEBRASKA MEDICAL JOURNAL, 1512 FirstTier Bank Bldg., Lincoln, NE 68508.

INTERNIST BC/BE: With or without subspecialty to join 5 physician single specialty group practice in S.W. Missouri, serving population of 1 million plus. Excellent opportunity, competitive salary guaranteed, incentive bonus. Malpractice and excellent benefits paid; opportunity for ownership. Pleasant recreational environment in the Ozarks. Call or mail CV to Adm., The Diagnostic Clinic, 3443 S. National, Springfield, MO 65807, (417)883-3443.

EMERGENCY MEDICINE: For Emergency Physician who possesses excellent clinical and trauma skills within a group of 7 Emergency Room Physicians located in beautiful northwest Wisconsin area. Please send C.V. to Dr. M. Jaghlit, 900 W. Clairemont Ave., Eau Claire, WI 54701, or call (715)839-4404.

AVAILABLE: Practice opportunity for family practice. Board certified desired. Grand Island, NE. Please reply to Box 030, **Nebraska Medical Journal**, 1512 FirstTier Bank Bldg., Lincoln, NE 68508.

LINCOLN: Medical Directorship available at 13,000 volume Emergency Department in 340-bed primary care hospital. Prefer eligible or certified EM physician with administrative experience. Compensation includes stipend plus hourly rate and comprehensive benefit package with life, health, and disability. Professional liability insurance procured on your behalf. For details contact: Tom Baldwin, Coastal Emergency Services, Inc., 425 New Ballas Rd., Suite 295, St. Louis, MO 63141; (314)432-0210, (800)227-2533 (outside MO).

FAMILY PHYSICIAN NEEDED: Immediate need for BC/BE Family Physician to join 2 established Family Physicians in private practice in N.W. Iowa community of 5,000. Modern Clinic across the street from JCAH hospital. Excellent salary and fringe benefits with partnership opportunity. Locum tenens opportunity available also. Call collect (712)324-2511 or contact Sheldon Family Practice Associates, 206 N. 7th Ave., Sheldon, IA 51201.

EMERGENCY MEDICINE—NEBRASKA: A full-time emergency department opportunity is currently available to provide coverage at several client hospitals in eastern Nebraska. Guaranteed rate of compensation and high-limit occurrence basis malpractice insurance coverage. Part-time positions are also available. For more information on our Nebraska opportunities, contact Mary Lou Doehrman, Spectrum Emergency Care, 6275 Lehman Dr., Suite C202, Colorado Springs, CO 80918; 1-800-525-3581.

Drug/Alcohol/Emotional/Other Health Problems

HELP IS AVAILABLE
FOR YOU

FOR A MEMBER OF YOUR FAMILY
FOR A PROFESSIONAL, FRIEND OR
COLLEAGUE

Call

The Physician's Advocacy Committee
(Nebraska Medical Association)

Strictly Confidential — Professional — Effective

For information call:

402-393-3216

(You do not have to give your name.)

ADVERTISER'S INDEX

A	
Ayerst Laboratories	16, 17, 18
B	
Bishop Clarkson Memorial Hospital.....	3
Burroughs Wellcome Company	9, 10, 11
C	
Creighton University Medical Center.....	13
D	
Donley Medical Supply	6
F	
Family Practice Recertification	12
I	
Info-Builders, Inc.	13
L	
Eli Lilly & Co.	8
M	
Marion Laboratories	14, 15
N	
Nebraska Beef Board.....	2
Norfolk Printing Co., Inc.....	6
P	
Postgraduate Medicine	19
R	
Roche Laboratories	23, 24
U	
Upjohn Co.	7

In acute and chronic edema due to CHF

FOR PREDICTABLE CONTROL

- **Less potassium loss for a given amount of sodium excretion than with furosemide¹⁻³**
- **Predictable dose response⁴**
- **Diuresis completed hours faster than with furosemide after oral dosing⁵**
- **Better GI absorption^{6,7}**
- **Early evening dosing helps prevent nocturnal dyspnea**

As with all loop diuretics, excessive doses of BUMEX can lead to profound diuresis with water and electrolyte depletion, including hypokalemia, so serum electrolytes should be monitored.



Bumex[®]

bumetanide/Roche

0.5-mg, 1-mg and 2-mg scored tablets; 2-ml ampuls and 2-ml, 4-ml and 10-ml vials (0.25 mg/ml)

References: 1. Flomenbaum W. *Am J Cardiol* 57(2): 38A-43A, 1986. 2. Brater DC, Fox WR, Chennovosin P. *J Clin Pharmacol* 21: 599-603, 1981. 3. Iber FL, Bour RA. *J Clin Pharmacol* 21: 697-700, 1981. 4. Henning R, Lundvall O. *Eur J Clin Pharmacol* 6: 224-227, 1973. 5. Physicians' Desk Reference, 40th ed. Otadell, NJ, Medical Economics Company, 1986, pp. 939, 1480. 6. Pentikainen PJ, et al. *Br J Clin Pharmacol* 4: 39-44, 1977. 7. *Lasix, A Review*. Somerville, NJ, Hoechst-Roussel Pharmaceuticals, Inc., 1980.

BUMEX[®]
(bumetanide/Roche)
0.5-mg, 1-mg and 2-mg scored tablets
2-ml ampuls, 2-ml, 4-ml and
10-ml vials (0.25 mg/ml)

Before prescribing, please consult complete product information, a summary of which follows:

WARNING: Bumex (bumetanide/Roche) is a potent diuretic which, if given in excessive amounts, can lead to a profound diuresis with water and electrolyte depletion. Therefore, careful medical supervision is required, and dose and dosage schedule have to be adjusted to the individual patient's needs. (See under DOSAGE AND ADMINISTRATION in complete product information.)

INDICATIONS AND USAGE: Edema associated with congestive heart failure, hepatic and renal disease, including the nephrotic syndrome.

Almost equal diuretic response occurs after oral and parenteral administration of Bumex. If impaired gastrointestinal absorption is suspected or oral administration is not practical, Bumex should be given by the intramuscular or intravenous route.

Successful treatment with Bumex following instances of allergic reactions to furosemide suggests a lack of cross-sensitivity.

CONTRAINDICATIONS: Anuria. Hypersensitivity and in patients in hepatic coma or in states of severe electrolyte depletion. Although Bumex can be used to induce diuresis in renal insufficiency, any marked increase in blood urea nitrogen or creatinine, or the development of oliguria during therapy of patients with progressive renal disease, is an indication for discontinuation of treatment.

WARNINGS: Dose should be adjusted to patient's needs. Excessive doses or too frequent administration can lead to profound water loss, electrolyte depletion, dehydration, reduction in blood volume and circulatory collapse with the possibility of vascular thrombosis and embolism, particularly in elderly patients.

Prevention of hypokalemia requires particular attention in patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis and ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, certain diarrheal states, or other states where hypokalemia is thought to represent particular added risk to the patients.

In patients with hepatic cirrhosis and ascites, sudden alterations of electrolyte balance may precipitate hepatic encephalopathy and coma. Treatment in such patients is best initiated in the hospital with small doses and careful monitoring of the patient's clinical status and electrolyte balance. Supplemental potassium and/or spironolactone may prevent hypokalemia and metabolic alkalosis in these patients. In cats, dogs and guinea pigs, Bumex has been shown to produce ototoxicity. Since Bumex is about 40 to 60 times as potent as furosemide, it is anticipated that blood levels necessary to produce ototoxicity will rarely be achieved. The potential for ototoxicity increases with intravenous therapy, especially at high doses.

Patients allergic to sulfonamides may show hypersensitivity to Bumex.

PRECAUTIONS: Measure serum potassium periodically and add potassium supplements or potassium-sparing diuretics, if necessary. Periodic determinations of other electrolytes are advised in patients treated with high doses or for prolonged periods, particularly in those on low salt diets.

Hyperurcemia may occur. Reversible elevations of the BUN and creatinine may occur, especially with dehydration and in patients with renal insufficiency. Bumex may increase urinary calcium excretion. Possibility of effect on glucose metabolism exists. Periodic determinations of blood sugar should be done, particularly in patients with diabetes or suspected latent diabetes. Patients should be observed regularly for possible occurrence of blood dyscrasias, liver damage or idiosyncratic reactions.

Especially in presence of impaired renal function, use of parenterally administered Bumex should be avoided in patients to whom aminoglycoside antibiotics are also being given, except in life-threatening conditions.

Drugs with nephrotoxic potential and bumetanide should not be administered simultaneously. Since lithium reduces renal clearance and adds a high risk of lithium toxicity, it should not be given with diuretics.

Probenecid should not be administered concurrently with Bumex.

Concurrent therapy with indomethacin not recommended.

Bumex may potentiate the effects of antihypertensive drugs, necessitating reduction in dosage.

Interaction studies in humans have shown no effect on digoxin blood levels.

Interaction studies in humans have shown Bumex to have no effect on warfarin metabolism or on plasma prothrombin activity.

Pregnancy: Bumex should be given to a pregnant woman only if the potential benefit justifies the potential risk to the fetus.

Bumetanide may be excreted in breast milk.

Pediatric Use: Safety and effectiveness below age 18 not established.

ADVERSE REACTIONS: Muscle cramps, dizziness, hypotension, headache and nausea, and encephalopathy (in patients with preexisting liver disease).

Less frequent clinical adverse reactions are weakness, impaired hearing, rash, pruritus, hives, electrocardiogram changes, abdominal pain, arthritic pain, musculoskeletal pain and vomiting.

Other clinical adverse reactions are vertigo, chest pain, ear discomfort, fatigue, dehydration, sweating, hyperventilation, dry mouth, upset stomach, renal failure, asterixis, itching, nipple tenderness, diarrhea, premature ejaculation and difficulty maintaining an erection.

Laboratory abnormalities reported are hyperurcemia, azotemia, hyperglycemia, increased serum creatinine, hypochloremia, hypokalemia, hyponatremia, and variations in CO₂ content, bicarbonate, phosphorus and calcium. Although manifestations of the pharmacologic action of Bumex, these conditions may become more pronounced by intensive therapy.

Diuresis induced by Bumex may also rarely be accompanied by changes in LDH, total serum bilirubin, serum proteins, SGOT, SGPT, alkaline phosphatase, cholesterol, creatinine clearance, deviations in hemoglobin, prothrombin time, hematocrit, platelet counts and differential counts. Increases in urinary glucose and urinary protein have also been seen.

DOSAGE AND ADMINISTRATION:

Oral Administration: The usual total daily dosage is 0.5 to 2.0 mg and in most patients is given as a single dose.

Parenteral Administration: Administer to patients (IV or IM) with GI absorption problem or who cannot take oral. The usual initial dose is 0.5 to 1 mg given over 1 to 2 minutes. If insufficient response, a second or third dose may be given at 2 to 3 hour intervals up to a maximum of 10 mg a day.

HOW SUPPLIED: Tablets, 0.5 mg (light green), 1 mg (yellow) and 2 mg (peach); bottles of 100 and 500; Prescription Packs of 30; Tel-E-Dose[®] cartons of 100. Imprint on tablets: 0.5 mg—ROCHE BUMEX 0.5; 1 mg—ROCHE BUMEX 1; 2 mg—ROCHE BUMEX 2.

Ampuls: 2 ml, 0.25 mg/ml, boxes of ten.

Vials: 2 ml, 4 ml and 10 ml, 0.25 mg/ml, boxes of ten.

P.I. 0985

Roche Laboratories



a division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110



LIEDER
NOV 09 1987
NL
OF MEDIC

Medic-3
DEFIBILLATOR

In acute and chronic edema due to CHF

A DIURETIC THAT GIVES YOU PREDICTABLE CONTROL

Bumex[®]
bumetanide/Roche

0.5-mg, 1-mg and 2-mg scored tablets; 2-ml ampuls
and 2-ml, 4-ml and 10-ml vials (0.25 mg/ml)

Please see adjacent page for references and summary of product information.
Copyright © 1987 by Hoffmann-La Roche Inc. All rights reserved.

THE NEBRASKA MEDICAL JOURNAL



119
Years



Contents

Editorial

- By Way of Introduction **397**
Benjamin R. Gelber, M.D.

Socioeconomic and Political Forum

- The Scope of Nursing Practice **398**
Charles L. Barton, M.D.

Original Articles

- Management of the Sexual
Assault Victim **401**
Robert J. Fagnant, M.D.
Gayle A. Russell, R.N., BSN
Gilles R. G. Monif, M.D.

X-Ray of the Month —
Arteriovenous Malformation
of the Brain

Zbigniew K. Wszolek,
Edward J. Schima, M.I.
James J. Phalen, M.D.

Clinical Diagnostic Imaging

- Case of the Month —
Newborn with Macrocephaly **406**
Joe Stavas, M.D.

Features

- President's Page **409**
The Auxiliary **412**
Welcome New Members **414**
In Memoriam **414**
Coming Meetings **415**

Reports

- Report of Officers. Delegates **417**
Councilors **433**
Elegates **433**
447

“Okay, so I know I need iron. Where do I get it?”

Faced with a Recommended Daily Dietary Allowance of 18 mg, the question is a good one for women aged 19-50. Iron is one of the nutrients most often lacking in the American diet. Low intakes of iron over prolonged time can lead to iron deficiency anemia.

In the 1986 USDA Continuing Survey of Food Intakes by Individuals¹, women of child-bearing years reported a mean intake of 1588 calories a day. Since the American diet averages about 6-7 mg of iron per 1000 calories, it's not surprising that the same survey found that most of these women are getting about 60 percent of their RDA for iron.

Yet consider, one three-ounce serving of lean sirloin contains 2.8 mg of iron, about forty to sixty percent of which is heme iron, the most bioavailable form. In addition, the presence of beef or other meats in a meal increases the bioavailability of nonheme iron from foods such as vegetables and grains.

Importantly, lean beef can also meet fat and cholesterol guidelines of most leading heart and health authorities. The how-to's are good

advice for almost anyone.

Start with “The Skinniest Six” shown below. None is more than 180 calories per three-ounce cooked, trimmed serving. All are easy to specify at the meat counter.

These six cuts also simplify portion control. Four ounces uncooked equals about three ounces cooked. Grilling, broiling and roasting add no extra fat in cooking. And the taste of beef makes it easy to dispense with fat-laden sauces.

Carefully chosen, prepared and served, “The Skinniest Six” provide an impressive list of essential nutrients for under 180 calories per three-ounce serving.

And as part of a specific plan to increase dietary iron, in a balanced diet beef can be one of the best-tasting recommendations you'll ever make.



BEEF



“The Skinniest Six”*						Composite of cooked retail cuts of beef*	
						Protein	25.9 g
<i>Eye of Round</i>	<i>Round Tip</i>	<i>Top Loin</i>	<i>Top Round</i>	<i>Sirloin</i>	<i>Tenderloin</i>	Iron	2.7 mg
1.65 mg iron	2.50 mg iron	2.10 mg iron	2.45 mg iron	2.85 mg iron	3.05 mg iron	Zinc	6.0 mg
155 calories	162 calories	172 calories	162 calories	177 calories	174 calories	Vitamin B-12	2.28 mcg
5.5 g total fat	6.4 g total fat	7.6 g total fat	5.3 g total fat	7.4 g total fat	7.9 g total fat	Thiamin	.08 mg
(2.1 g saturated fat)	(2.3 g saturated fat)	(3.0 g saturated fat)	(1.8 g saturated fat)	(3.0 g saturated fat)	(3.1 g saturated fat)	Niacin	3.6 mg
59 mg cholesterol	69 mg cholesterol	65 mg cholesterol	72 mg cholesterol	76 mg cholesterol	72 mg cholesterol	Sodium	55 mg
						Total Fat	8.7 g
						(Saturated Fat)	(3.4 g)
						Cholesterol	76 mg
						Calories	189

*Uncooked whole cuts are shown for purpose of identification.

1. United States Department of Agriculture. Nationwide Food Consumption Survey. Continuing Survey of Food Intakes by Individuals (NFC, CSII). Report No. 86-1. *Nutrients in 3 oz. Trimmed and cooked. USDA Handbook 8-13. Rev. 1986.

For More Information Contact: Nebraska Beef Board, P.O. Box 248, Kearney, NE 68848-2408, (308) 236-7551.

The complete journal for family practice physicians

- Reaches 79,000 family physicians monthly
- Presents the most commonly seen patient problems in family practice
- Written by physicians for physicians
- The most current clinical updates in:

Cardiology
Diabetes
Pediatrics

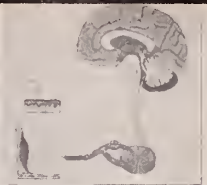
Ob/Gyn
Psychiatry
Gastroenterology

- Provides 20 hours of CME Category 1 Credit

*For subscription — Call 203-629-3550

PRACTICAL • CLINICAL • EDUCATIONAL • CURRENT

FPP
R



Pain pathways, page 63

Family Practice Recertification*

JULY 1987 VOL. 9 NO. 7

CLINICAL ARTICLES

- Endometrial Cancer: Causes and Patient Evaluation
- Pain Management in Primary Care
- Controlling Side Effects of Antipsychotic Drugs, Part 2: Extrapyrimalidal Symptoms
- Osteoporosis, Part 2: Prevention and Treatment

KEEPING CURRENT

- Assessing Impairment of Elderly Hospitalized Patients - Routine Radiological Testing for Respiratory Illness - Using Ultrasound to Detect Hip Abnormalities - Diagnosing Bone Infection Under Pressure Sores - Slowing Progression of Diabetic Nephropathy - Behavioral Disorders Among Children of Alcoholics - Catheter-Related Septic Central Venous Thrombosis	- Withdrawing Patients From Antihypertensive Drug Therapy - Cesarean Section and Infant Survival - Preventing Neonatal Group B Streptococcal Disease - Diagnosing Acute Scrotal Pain - Urinary Tract Infections Among Uncircumcised Infants - Colonoscopy: Detecting Recurrent Colorectal Cancer - Surgical Management of Chronic Intestinal Ischemia - Preventing Travelers' Diarrhea
--	---

SPECIAL FEATURE

Willingway: A Fellowship in Alcoholism and Drug Addiction

ORGANIZATIONS, NATIONAL

American Academy of Family Physicians
1740 West 92nd St., Kansas City, MO 64114

American Academy of Pediatrics
James E. Strain, M.D., Executive Director
141 Northwest Point Road, P.O. Box 927
Elk Grove Village, IL 60009-0927

American Academy of Physician Assistants
F. Lynn Maly, Executive Vice President
1117 N. 19th St., 3rd Floor
Arlington, VA 22209

American Academy of Ophthalmology
Thomas P. Kearns, M.D., President
655 Beach Street, P.O. Box 7424
San Francisco, CA 94120-7424

American College of Emergency Physicians
Colin C. Rorrie, Jr., Ph.D., Executive Director
Box 619911, Dallas, TX 75261-9911

American College of Legal Medicine
Mr. Thomas W. Teal, Executive Secretary
P.O. Box 190, Maple Glen, PA 19002

American College of Obstetricians & Gynecologists
Warren H. Pearse, M.D., Executive Director
600 Maryland Avenue, S.W., Ste. 300 E
Washington, D.C. 20024

American College of Physicians
John R. Ball, M.D., J.D., F.A.C.P., Exec. Vice President
4200 Pine St., Philadelphia, PA 19104

American College of Radiology
John J. Curry, Executive Director
1981 Preston White Drive, Reston, VA 22091

American College of Surgeons
Paul A. Ebert, M.D., Director
55 East Erie St., Chicago, IL 60611

American Diabetes Association, Inc.
Robert S. Bolan, Exec. Vice President
1660 Duke Street, Alexandria, VA 22314

American Heart Association National Center
Mr. Dudley Hafner, Exec. Vice President
7320 Greenville Ave., Dallas, TX 75231

American Hospital Association
Carol M. McCarthy, Ph.D., J.D., President
840 North Lake Shore Dr., Chicago, IL 60611

American Medical Association
James H. Sammons, M.D., Exec. Vice President
535 No. Dearborn St., Chicago, IL 60610

American Society of Anesthesiologists
Mr. J. W. Andes, Executive Secretary
515 Busse Hwy., Park Ridge, IL 60068

American Society of Clinical Pathologists
Robert A. Dietrich, M.D., Chief Executive
2100 W. Harrison St., Chicago, IL 60612

American Society of Internal Medicine
Joseph F. Boyle, M.D., Exec. Vice President
1101 Vermont N.W., Ste. 500, Washington, D.C. 20005

American Urological Society
Mr. Richard J. Hannigan, Executive Secretary
1120 No. Charles St., Baltimore, MD 21201

Arthritis Foundation
Clifford M. Clarke, C.A.E., President
1314 Spring St., N.W., Atlanta, GA 30309

International College of Surgeons
F. C. Ottati, M.D., Int. Sec. General
1516 North Lake Shore Dr., Chicago, IL 60610

National Rehabilitation Association
633 S. Washington St., Alexandria, VA 22314

Radiological Society of North America
Richard E. Buenger, M.D., President
1415 W. 22nd St., Oak Brook, IL 60521

South Central Section of the American Urological Association, Inc.
Henry Kammendel, M.D., Past President
8300 Dodge St., Ste. 407, Omaha, NE 68114

ORGANIZATIONS, STATE

- American Cancer Society, Nebraska Division, Inc.**
Don W. McClure, Exec. Vice President
8502 West Center Rd., P.O. Box 241255, Omaha 68124-5255
- American Diabetes Association - Nebraska Affiliate, Inc.**
Ron Van Ryswyk, Ed.D., Executive Director
2730 South 114th St., Omaha 68144
- American Heart Association, Nebraska Affiliate**
Dennis N. Nissen, Executive Director
3624 Farnam St., Omaha 68131
- American Lung Association of Nebraska**
8901 Indian Hills Dr., Ste. 107, Omaha 68114
215 Centennial Mall South, Room 521, Lincoln 68508
- American Red Cross**
P.O. Box 83267
1701 "E" St., Lincoln 68501
- Arthritis Foundation, Nebraska Chapter, Inc.**
Ellen Wright, Exec. Director
2229 N. 91st Court, Omaha 68134
- Blue Cross and Blue Shield of Nebraska**
William H. Heavey, President
P.O. Box 3248, Main Station, Omaha 68180
- Cerebral Palsy of Lancaster County, Inc.**
Jane Hoffart, Client Services Rep.
P.O. Box 80103, Lincoln 68501
- Creighton University School of Medicine**
Richard O'Brien, M.D., Dean
California at 24th St., Omaha 68178
- Dairy Council of Central States, Inc.**
7500 Main, 103 Hillcrest Landing
Ralston 68127
- Division of Rehabilitation Services**
Nebraska Department of Education
6th Floor, 301 Centennial Mall South, Lincoln 68509
- Division of Rehabilitation Services for the Visually Impaired**
James S. Nyman, Ph.D., Director
4600 Valley Road, Lincoln 68510
- Easter Seal Society of Nebraska**
Mrs. Letitia K. Simmons, Executive Director
3015 North 90th St., #6, Omaha 68134
- Lincoln Council on Alcoholism and Drugs**
914 "L" Street, Lincoln 68508
- March of Dimes - Birth Defects Foundation**
1618 L Street, Lincoln 68508
- MID-PLAINS POISON CONTROL CENTER**
Childrens Memorial Hospital, 8301 Dodge St., Omaha 68114
(402) 390-5400 or 800-642-9999 (toll free Nebraska)
- Midlands Chapter, National Multiple Sclerosis Society**
538 Elkwood Mall/The Center
42nd & Center, Omaha 68105-2982
- Missouri Valley Dermatologic Society**
John R. Luckasen, M.D., Secretary
360 Doctors Bldg., N. Tower, Omaha 68131
- Muscular Dystrophy Association**
1912 No. 90th St., Lower Level, Omaha 68114
- National Kidney Foundation of Nebraska**
Karen Engelsman, Executive Director
2212 No. 91st Plaza, Omaha 68134
(402) 397-9234 - NE toll free 800-642-1255
- National Society to Prevent Blindness, Nebraska Affiliate**
120 North 69th St., Suite 203, Omaha 68132-2720
- Nebraska Academy of Ophthalmology**
Mylan VanNewkirk, M.D., President
329 West 40th, Scottsbluff 69361
- Nebraska Academy of Otolaryngology**
Michael Crawford, M.D., President
201 Ridge St., #311, Council Bluffs, IA 51501
- Nebraska Allergy Society**
Linda B. Ford, M.D., President
401 E. Gold Coast Rd., Papillion 68128
- Nebraska Association of Nuclear Physicians, Inc.**
Merton A. Quaife, M.D., President
Division of Nuclear Medicine, Dept. of Radiology
UNMC - 42nd & Dewey, Omaha 68105
- Nebraska Association of Pathologists**
Joseph Rapoport, M.D., President
6901 No. 72nd St., Omaha 68122
- Nebraska Chapter - American Academy of Family Physicians**
Paul M. Paulman, M.D., Secretary-Treasurer
Phyllis G. Hansen, Executive Secretary
River City Office Park, #202, 401 N. 117th, Omaha 68154
- Nebraska Chapter - American Academy of Physician Assistants**
Joe E. Jeter, P.A.-C, President
P.O. Box 397, North Bend 68649
- Nebraska Chapter - American Academy of Pediatrics**
Thomas Tonniges, M.D., Chairman
2115 N. Kansas Ave., Hastings 68901
- Nebraska Chapter - American College of Emergency Physicians**
Richard L. Keller, M.D., President
9641 No. 29th, Omaha 68112
- Nebraska Chapter - American College of Surgeons**
Louis J. Gogela, M.D., Past President
2221 South 17th St., Lincoln 68502
- Nebraska Chapter - American College of Physicians**
Frederick F. Paustian, M.D., F.A.C.P., Governor
UNMC - 42nd & Dewey Ave., Omaha 68105
- Nebraska Chapter of Myasthenia Gravis Foundation**
John F. Aita, M.D., Medical Advisor
105 So. 49th St., Omaha 68132
- Nebraska Cystic Fibrosis Association**
Charles R. Bercaw, Executive Director
P.O. Box 31235, Omaha 68131
- Nebraska Dental Association**
Barry Ross, Executive Director
3120 O St., Lincoln 68510
- Nebraska Dietetic Association**
Linda O. Young, M.S., R.D., President
University of NE - 214 Ruth Leverton Hall, Lincoln 68503-0806
- Nebraska Health Care Association**
Patricia Snyder, Executive Director
3100 "O" St., Ste. 7, Lincoln 68510
- Nebraska Hospital Association**
Harlan Heald, President
Box 94833, 1335 L St., Lincoln 68509
- Nebraska League for Nursing**
Priscilla Allen, R.N., President
3800 N. 6th, #5, Beatrice 68310
- Nebraska Medical Association**
William L. Schellpeper, Executive Director
1512 FirstTier Bank Bldg., Lincoln 68508
- Nebraska Medical Foundation**
William L. Schellpeper, Executive Director
1512 FirstTier Bank Bldg., Lincoln 68508
- Nebraska Nurses Association**
Mary Ann Sak, Executive Director
Suite 711, Terminal Bldg., Lincoln 68508
- Nebraska Orthopaedic Society**
Ronald Schwab, M.D., Secretary
2300 South 13th St., Lincoln 68502
- Nebraska Perinatal Organization**
Sheila Ecklund, R.N.
St. Elizabeth Community Health Center, 555 So. 70th, Lincoln 68510
- Nebraska Pharmacists Association**
Tom R. Dolan, R.P., Executive Director
600 So. 12th, Lincoln 68508
- Nebraska Psychiatric Society, District Branch of the American Psychiatric Association**
Jehangir B. Bastani, M.D., President
8110 Myrtle, Lincoln 68506
- Nebraska Public Health Association**
President, N.P.H.A.
P.O. Box 94813, Lincoln 68509
- Nebraska Radiological Society**
Terrance R. Rusthoven, M.D., President
2112 Faidley, Grand Island 68801
- Nebraska Rheumatism Association**
Arthur L. Weaver, M.D., President
2121 South 56th St., Lincoln 68506
- Nebraska Section, American College of Obstetricians & Gynecologists**
Larry E. Roffman, M.D.
800 Doctors Bldg., Omaha 68131
- Nebraska Society of Anesthesiologists**
K. Reed Peters, M.D., President
1512 FirstTier Bank Bldg., Lincoln 68508
- Nebraska Society of Internal Medicine**
Vernon Garwood, M.D., President
120 Wedgewood Ave., Suite A, Lincoln 68510
- Nebraska Society of Medical Assistants, Inc., an Affiliate of the American Association of Medical Assistants**
Patty Hafer, CMA, President
Box 184, Sutherland 69165
- Nebraska Society for Respiratory Therapy**
Charlotte Pascoe, R.R.T., President
Southeast Community College, Lincoln 68505
- Nebraska State Department of Health**
Gregg Wright, M.D., Director of Health
301 Centennial Mall South, P.O. Box 95007, Lincoln 68509
- Nebraska State Obstetric and Gynecology Society**
Dennis D. Beavers, M.D., Secretary-Treasurer
720 No. 87th St., Omaha 68114
- Nebraska Stroke Foundation**
Karyl Newman, President
P.O. Box 67004, Lincoln 68506
- Nebraska Urological Association**
Alan H. Domina, M.D., President
4740 A Street, Lincoln 68510
- Nebraska Veterinary Medical Association**
Don Ellerbee, Executive Director
209 West 9th St., Hastings 68901
- Omaha Mid-West Clinical Society**
Ms. Lorraine E. Seibel, Executive Secretary
7363 Pacific St., #205-B, Omaha 68114
- Physician Referral Program, Nebraska Department of Health**
3rd Floor, State Office Building, 301 Centennial Mall So., Lincoln 68509
- University of Nebraska Medical Center**
Charles E. Andrews, M.D., Chancellor
42nd & Dewey Ave., Omaha 68105

The Nebraska Medical Journal

EDITOR —

BENJAMIN R. GELBER, M.D.
Neurological Surgery
2221 So. 17th St., Suite 310
Lincoln, NE 68502

ASSOCIATE EDITOR

Scott P. Liggett, M.D., Lincoln

EDITORIAL BOARD:

James O. Armitage, M.D., Lincoln
Rodney S.W. Basler, M.O., Lincoln
Jehangir B. Bastani, M.O., Lincoln
John H. Casey, M.D., Lincoln
Paul E. Collicott, M.D., Lincoln
John F. Connolly, M.O., Omaha
Oouglass Oecker, Jr., M.D., Lincoln
Alan D. Forker, M.D., Lincoln
Deepak M. Gangahar, M.D., Lincoln
Robert W. Gillespie, M.D., Lincoln
Stephen R. Grenier, M.O., Lincoln
Bruce D. Gutnik, M.D., Omaha
Roger Harned, M.D., Omaha
Edward A. Holyoke, Jr., M.D., Ogallala
Sushil S. Lacy, M.D., Omaha
Hal K. Mardis, M.O., Omaha
Gilles R. G. Monif, M.D., Omaha
Walter J. O'Onohue, M.D., Omaha
William F. Rayburn, M.D., Omaha
John L. Reed, M.D., Lincoln
Jerald R. Schenken, M.O., Omaha
Kenton L. Shaffer, M.D., Kearney
Harlan C. Shriner, Jr., M.D., Lincoln
Joseph M. Stavas, M.D., Lincoln
Patricia Cole Stivins, M.O., Lincoln
Harold W. Thaut, M.D., Beatrice
Jon S. Thompson, M.D., Omaha
William L. Vosik, M.D., Kearney
Arthur Weaver, M.D., Lincoln
Charles S. Wilson, M.O., Lincoln



SUBSCRIPTION RATE

\$18.00 Per Year U.S.
\$18.00 Per Year Foreign Country
Single Copies \$1.50 Each

Copyright® 1987 Nebraska Medical Association. Information concerning reprints of the articles in this Journal and concerning obtaining permission for the reproduction of any portion of this Journal may be obtained from the Editor.

The Nebraska Medical Journal does not assume responsibility for statements made or opinions expressed by the authors. Products and services advertised are neither endorsed nor warranted by the Nebraska Medical Association. The Nebraska Medical Journal reserves the right to accept or reject advertising copy.

Published monthly and Second-Class Postage paid at Lincoln, Nebraska and at additional mailing offices (ISSN 0091-6730)

Address all correspondence relating to subscriptions, advertising or address changes to William L. Schellpeper, Business Manager, 1512 First Tier Bank Building, Lincoln, Nebraska 68508. Phone (402) 474-4472.

VOL. 72, NO. 12

DECEMBER 1987

EDITORIAL —

- By Way of Introduction 397
Benjamin R. Gelber, M.D.

SOCIOECONOMIC AND POLITICAL FORUM —

- The Scope of Nursing Practice..... 398
Charles L. Barton, M.D.

ORIGINAL ARTICLES —

- Management of the Sexual Assault Victim 401
Robert J. Fagnant, M.D.
Gayle A. Russell, R.N., BSN
Gilles R. G. Monif, M.D.

X-Ray of the Month —

- Arteriovenous Malformation of the Brain 404
Zbigniew K. Wszolek, M.D.
Edward J. Schima, M.D.
James J. Phalen, M.D.

CLINICAL DIAGNOSTIC IMAGING —

- Case of the Month —
Newborn with Macrocephaly 406
Joe Stavas, M.D.

FEATURES —

- President's Page 409
The Auxiliary 412
Welcome New Members 414
In Memoriam..... 414
Coming Meetings..... 415

REPORTS —

- Report of Officers, Delegates,
and Committees 417
Report of Board of Councilors 433
Report of House of Delegates..... 433

INDEX to Volume 72 447

Since 1925

Nebraska's Leading Physicians and Surgical Supply House

Phone 474-3222



**DONLEY MEDICAL
SUPPLY COMPANY**

P.O. Box 83108, Lincoln, NE 68501
AUTHORIZED CONTRACT AGENT

REPRINTS

OF YOUR

Technical Articles

Are a direct presentation of research
and a valuable supplement
to any doctor's library.



It costs very little
to run reprints —
write us for prices

Norfolk Printing Co., Inc.

118 North Fifth
NORFOLK, NEBRASKA 68701

Letterheads - Statements
Envelopes - Office Forms
Quality Printing at the Right Price

ADVICE TO AUTHORS

Manuscripts should be submitted in duplicate to the Editor at the following address: Alan D. Forker, M.D., 5505 Ellendale Road, Lincoln, Nebraska 68510. The manuscript should be typewritten, double-spaced, on 8½ x 11 in. paper, with generous margins on each page. Number all pages in the right upper corner with the author's surname.

Review articles will be considered, and should generally be limited to less than 4,000 words and approximately 30 references.

Manuscripts describing original clinical or laboratory research should be limited to 2,000 words and approximately 20 references.

Acknowledgements must be given when material from other publications is included. Provide names of authors, title of article, title of journal or book, volume number, pages, month and year, and publisher's permission to reprint.

Always send a covering letter or letter of transmittal with each manuscript, and refer to the manuscript by its title, in the letter and all correspondence. Do not send a manuscript that was published elsewhere.

Title page: each manuscript should have a title page, including the full name, academic degree, and hospital or university affiliation of each author. A name and address for reprint requests should be included on the title page, including street address, city, state, and zip code.

Summary for article: all major scientific articles should be accompanied by a summary at the end of the article, summarizing the key information and recommendations presented.

References: should be listed in the order in which they appear in the article and should be typed double-spaced. Authors are responsible for the completeness and accuracy of all cited references. Journal references should include authors' names and initials, title of article, abbreviated name of Journal (as listed in Index Medicus), volume number, inclusive pages, and year of publication. References to books should include authors, title, location and name of publisher, year of publication, edition, and page numbers.

Tables and illustrations: should be typed double-spaced on separate sheets of 8½ x 11 in. paper. Each Table should have a title. Illustrations should be prepared professionally and submitted as high-quality, glossy, unmounted black-and-white photographic prints, at least 5 x 7 in. Do not send original artwork. Each illustration should be consecutively numbered and cited in the text. Each photograph should have a gummed label on the back containing the figure number, name of senior author and an arrow indicating top of figure. Legends should be typed double-space for each illustration. Permission to reproduce a picture of a patient is needed, if such a picture is included.

Letters-to-the-Editor: letters are encouraged by all readers and will be published as space permits and at the discretion of the Editor. All letters should be accompanied by the notation: For publication. Galley proofs generally will not be returned to the authors pre-publication.

Manuscripts will be published in the order in which they are received, particularly in the order in which galley proofs are returned from the authors. The Editor of this Journal assumes no responsibility for opinions and claims expressed in an article published in this Journal.

Reprints should be ordered from the printer, Norfolk Printing Company, Inc., P.O. Box 278, Norfolk, Nebraska 68701.

Before prescribing, see complete prescribing information in SK&F CO. literature or PDR. The following is a brief summary.

WARNING

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically serum K⁺ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K⁺ intake. Associated widened QRS complex or arrhythmia requires prompt additional therapy. Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.

Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium; use with caution with 'Dyazide'. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin [ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function. Thiazides may add to or potentiate the action of other anti-hypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.

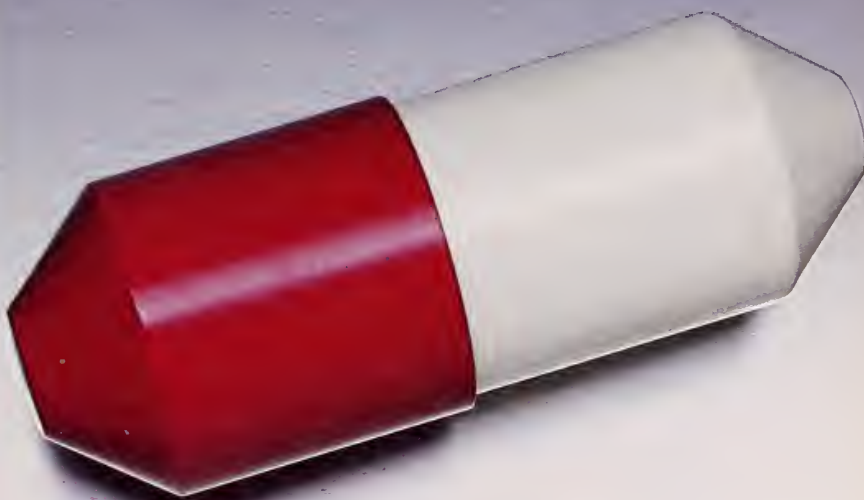
Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak™ unit-of-use bottles of 100.

BRS-DZ:L42

In Hypertension* ... When You Need to Conserve K⁺

Remember the Unique Red and White Capsule: Your Assurance of SK&F Quality

Serum K⁺ and BUN should be checked periodically (see Warnings and Precautions)



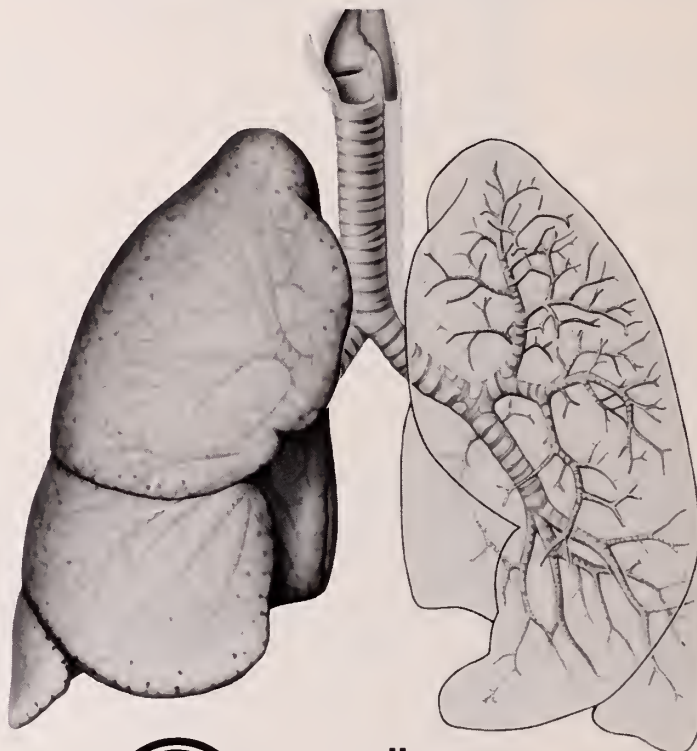
Potassium-Sparing
DYAZIDE®
25 mg Hydrochlorothiazide/50 mg Triamterene/SKF
Over 20 Years of Confidence

a product of
SK&F CO.
Carolina, P.R. 00630

The unique
red and white
Dyazide® capsule:
Your assurance of
SK&F quality.



Consider the causative organisms...



Ceclor[®]
cefaclor

250-mg Pulvules[®] t.i.d.
offers effectiveness against
the major causes of bacterial bronchitis

Haemophilus influenzae and *Streptococcus pneumoniae*
(ampicillin-susceptible and ampicillin-resistant)

Note: Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

Ceclor[®] (cefaclor)

Summary. Consult the package literature for prescribing information.

Indication: Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A β -hemolytic streptococci).

Contraindication: Known allergy to cephalosporins.

Warnings:

CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients. Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:

- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)
Therapy-related adverse reactions are uncommon. Those reported include:

- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nerv-

ousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.

- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology

- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest[®] tablets but not with Tes-Tape[®] (glucose enzymatic test strip, Lilly).

1061787LJ
PA 0709 AMP

©1987, ELI LILLY AND COMPANY CR-5005-8-849318



Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285

Eli Lilly Industries, Inc.
Carolina, Puerto Rico 00630

A woman with dark hair, wearing an orange long-sleeved shirt and dark pants, sits alone at a small white round table in a cafe. She is looking down at a cup of coffee on the table. The cafe has many similar white tables and heart-shaped metal chairs, all of which are empty except for her. The background is a dark wooden wall.

**"Living in the city
is lonely enough...
with herpes it's like
solitary confinement."**

ZOVIRAX[®]
(acyclovir)
CAPSULES

**Prevent genital herpes
recurrences
month after month with
daily therapy.**

*(In controlled studies, recurrences were
totally prevented for 4 to 6 months in up to
75% of patients.)*

*Please see last page of this advertisement for
brief summary of prescribing information.*

ZOVIRAX[®] **(acyclovir)** **CAPSULES**

**Help free your
patients from
recurrences.**

Daily therapy

Coping with genital herpes is rarely easy. For some, the worst part is the pain and discomfort of frequent attacks — month after month, year after year. For others, the emotional burden presents a more difficult problem, leading to social isolation, anxiety, and diminished self-esteem.

Prevent or reduce recurrences

Although your patients have to live with herpes, they shouldn't have to suffer. Daily therapy with ZOVIRAX CAPSULES can help free them from the cycle of recurrent genital herpes. For many, one capsule three times a day can suppress recurrences completely while on therapy.

Generally well tolerated

Daily therapy with ZOVIRAX CAPSULES is generally well tolerated. The most frequent adverse reactions reported during clinical trials were headache, diarrhea, nausea/vomiting, vertigo, and arthralgia.

The physical and emotional difficulties posed by genital herpes are unique for each patient. The frequency and severity of recurrent episodes, as well as the emotional impact of the disease, should be considered when selecting daily therapy with ZOVIRAX CAPSULES.

*Please see brief summary of
prescribing information on next page.*



Prevent recurrences month after month*

ZOVIRAX®

(acyclovir) CAPSULES

Brief Summary

INDICATIONS AND USAGE: Zovirax Capsules are indicated for the treatment of initial episodes and the management of recurrent episodes of genital herpes in certain patients.

The severity of disease is variable depending upon the immune status of the patient, the frequency and duration of episodes, and the degree of cutaneous or systemic involvement. These factors should determine patient management, which may include symptomatic support and counseling only, or the institution of specific therapy. The physical, emotional and psycho-social difficulties posed by herpes infections as well as the degree of debilitation, particularly in immunocompromised patients, are unique for each patient, and the physician should determine therapeutic alternatives based on his or her understanding of the individual patient's needs. Thus Zovirax Capsules are not appropriate in treating all genital herpes infections. The following guidelines may be useful in weighing the benefit/risk considerations in specific disease categories:

First Episodes (primary and nonprimary infections — commonly known as initial genital herpes):

Double-blind, placebo-controlled studies have demonstrated that orally administered Zovirax significantly reduced the duration of acute infection (detection of virus in lesions by tissue culture) and lesion healing. The duration of pain and new lesion formation was decreased in some patient groups. The promptness of initiation of therapy and/or the patient's prior exposure to Herpes simplex virus may influence the degree of benefit from therapy. Patients with mild disease may derive less benefit than those with more severe episodes. In patients with extremely severe episodes, in which prostration, central nervous system involvement, urinary retention or inability to take oral medication require hospitalization and more aggressive management, therapy may be best initiated with intravenous Zovirax.

Recurrent Episodes:

Double-blind, placebo-controlled studies in patients with frequent recurrences (6 or more episodes per year) have shown that Zovirax Capsules given for 4 to 6 months prevented or reduced the frequency and/or severity of recurrences in greater than 95% of patients. Clinical recurrences were prevented in 40 to 75% of patients. Some patients experienced increased severity of the first episode following cessation of therapy; the severity of subsequent episodes and the effect on the natural history of the disease are still under study.

The safety and efficacy of orally administered acyclovir in the suppression of frequent episodes of genital herpes have been established only for up to 6 months. Chronic suppressive therapy is most appropriate when, in the judgement of the physician, the benefits of such a regimen outweigh known or potential adverse effects. In general, Zovirax Capsules should not be used for the suppression of recurrent disease in mildly affected patients. Unanswered questions concerning the human relevance of *in vitro* mutagenicity studies and reproductive toxicity studies in animals given very high doses of acyclovir for short periods (see Carcinogenesis, Mutagenesis, Impairment of Fertility) should be borne in mind when designing long-term management for individual patients. Discussion of these issues with patients will provide them the opportunity to weigh the potential for toxicity against the severity of their disease. Thus, this regimen should be considered only for appropriate patients and only for six months until the results of ongoing studies allow a more precise evaluation of the benefit/risk assessment of prolonged therapy.

Limited studies have shown that there are certain patients for whom intermittent short-term treatment of recurrent episodes is effective. This approach may be more appropriate than a suppressive regimen in patients with infrequent recurrences.

Immunocompromised patients with recurrent herpes infections can be treated with either intermittent or chronic suppressive therapy. Clinically significant resistance, although rare, is more likely to be seen with prolonged or repeated therapy in severely immunocompromised patients with active lesions.

CONTRAINDICATIONS: Zovirax Capsules are contraindicated for patients who develop hypersensitivity or intolerance to the components of the formulation.

WARNINGS: Zovirax Capsules are intended for oral ingestion only.

PRECAUTIONS: General: Zovirax has caused decreased spermatogenesis at high doses in some animals and mutagenesis in some acute studies at high concentrations of drug (see PRECAUTIONS—Carcinogenesis, Mutagenesis, Impairment of Fertility). The recommended dosage and length of treatment should not be exceeded (see DOSAGE AND ADMINISTRATION).

Exposure of Herpes simplex isolates to acyclovir *in vitro* can lead to the emergence of less sensitive viruses. The possibility of the appearance of less sensitive viruses in man must be borne in mind when treating patients. The relationship between the *in vitro* sensitivity of Herpes simplex virus to acyclovir and clinical response to therapy has yet to be established.

Because of the possibility that less sensitive virus may be selected in patients who are receiving acyclovir, all patients should be advised to take particular care to avoid potential transmission of virus if active lesions are present while they are on therapy. In severely immunocompromised patients, the physician should be aware that prolonged or repeated courses of acyclovir may result in selection of resistant viruses which may not fully respond to continued acyclovir therapy.

Drug Interactions: Co-administration of probenecid with intravenous acyclovir has been shown to increase the mean half-life and the area under the concentration-time curve. Urinary excretion and renal clearance were correspondingly reduced.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Acyclovir was tested in lifetime bioassays in rats and mice at single daily doses of 50, 150 and 450 mg/kg given by gavage. There was no statistically significant difference in the incidence of tumors between treated and control animals, nor did acyclovir shorten the latency of tumors. In 2 *in vitro* cell transformation assays, used to provide preliminary assessment of potential oncogenicity in advance of these more definitive life-time bioassays in rodents, conflicting results were obtained. Acyclovir was positive at the highest dose used in one system and the resulting morphologically transformed cells formed tumors when inoculated into immunosuppressed, syngeneic, weanling mice. Acyclovir was negative in another transformation system considered less sensitive.

In acute studies, there was an increase, not statistically significant, in the incidence of chromosomal damage at maximum tolerated parental doses of 100 mg/kg acyclovir in rats but not Chinese hamsters; higher doses of 500 and 1000 mg/kg were clastogenic in Chinese hamsters. In addition, no activity was found after 5 days dosing in a dominant lethal study in mice. In 6 of 11 microbial and mammalian cell assays, no evidence of mutagenicity was observed. At 3 loci in a Chinese hamster ovary cell line, the results were inconclusive. In 2 mammalian cell assays (human lymphocytes and L5178Y mouse lymphoma cells *in vitro*), positive responses for mutagenicity and chromosomal damage occurred, but only at concentrations at least 400 times the acyclovir plasma levels achieved in man.

Acyclovir has not been shown to impair fertility or reproduction in mice (450 mg/kg/day, p.o.) or in rats (25 mg/kg/day, s.c.). At 50 mg/kg/day s.c. in the rat, there was a statistically significant increase in post-implantation loss, but no concomitant decrease in litter size. In female rabbits treated subcutaneously with acyclovir subsequent to mating, there was a statistically significant decrease in implantation efficiency but no concomitant decrease in litter size at a dose of 50 mg/kg/day. No effect upon implantation efficiency was observed when the same dose was administered intravenously. In a rat peri- and postnatal study at 50 mg/kg/day s.c., there was a statistically significant decrease in the group mean numbers of corpora lutea, total implantation sites and live fetuses in the F₁ generation. Although not statistically significant, there was also a dose related decrease in group mean numbers of live fetuses and implantation sites at 12.5 mg/kg/day and 25 mg/kg/day, s.c. The intravenous administration of 100 mg/kg/day, a dose known to cause obstructive nephropathy in rabbits, caused a significant increase in fetal resorptions and a corresponding decrease in litter size. However, at a

maximum tolerated intravenous dose of 50 mg/kg/day in rabbits, there were no drug-related reproductive effects.

Intraperitoneal doses of 320 or 80 mg/kg/day acyclovir given to rats for 1 and 6 months, respectively, caused testicular atrophy. Testicular atrophy was persistent through the 4-week postdose recovery phase after 320 mg/kg/day; some evidence of recovery of sperm production was evident 30 days post-dose. Intravenous doses of 100 and 200 mg/kg/day acyclovir given to dogs for 31 days caused spermatogenesis. Testicles were normal in dogs given 50 mg/kg/day, i.v. for one month.

Pregnancy: Teratogenic Effects: Pregnancy Category C. Acyclovir was not teratogenic in the mouse (450 mg/kg/day, p.o.), rat (50 mg/kg/day, s.c.) or rabbit (50 mg/kg/day, s.c. and i.v.). There are no adequate and well-controlled studies in pregnant women. Acyclovir should not be used during pregnancy unless the potential benefit justifies the potential risk to the fetus. Although acyclovir was not teratogenic in animal studies, the drug's potential for causing chromosome breaks at high concentration should be taken into consideration in making this determination.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Zovirax is administered to a nursing woman. In nursing mothers, consideration should be given to not using acyclovir treatment or discontinuing breastfeeding.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS—Short-Term Administration: The most frequent adverse reactions reported during clinical trials were nausea and/or vomiting in 8 of 298 patient treatments (2.7%) and headache in 2 of 298 (0.6%). Less frequent adverse reactions, each of which occurred in 1 of 298 patient treatments (0.3%), included diarrhea, dizziness, anorexia, fatigue, edema, skin rash, leg pain, inguinal adenopathy, medication taste and sore throat.

Long-Term Administration: The most frequent adverse reactions reported in studies of daily therapy for 3 to 6 months were headache in 33 of 251 patients (13.1%), diarrhea in 22 of 251 (8.8%), nausea and/or vomiting in 20 of 251 (8.0%), vertigo in 9 of 251 (3.6%), and arthralgia in 9 of 251 (3.6%). Less frequent adverse reactions, each of which occurred in less than 3% of the 251 patients (see number of patients in parentheses), included skin rash (7), insomnia (4), fatigue (7), fever (4), palpitations (1), sore throat (2), superficial thrombophlebitis (1), muscle cramps (2), paronychia (1), menstrual abnormality (4), acne (3), lymphadenopathy (2), irritability (1), accelerated hair loss (1), and depression (1).

DOSAGE AND ADMINISTRATION: Treatment of initial genital herpes: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 10 days (total 50 capsules).

Chronic suppressive therapy for recurrent disease: One 200 mg capsule 3 times daily for up to 6 months. Some patients may require more drug, up to one 200 mg capsule 5 times daily for up to 6 months.

Intermittent Therapy: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 5 days (total 25 capsules). Therapy should be initiated at the earliest sign or symptom (prodrome) of recurrence.

Patients With Acute or Chronic Renal Impairment: One 200 mg capsule every 12 hours is recommended for patients with creatinine clearance ≤ 10 ml/min/1.73 m².

HOW SUPPLIED: Zovirax Capsules (blue, opaque) containing 200 mg acyclovir and printed with "Wellcome ZOVIRAX 200" - Bottles of 100 (NDC-0081-0991-55) and unit dose pack of 100 (NDC-0081-0991-56).

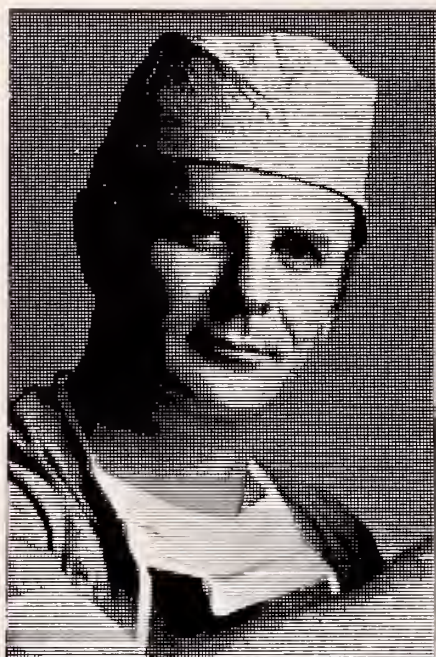
Store at 15°-30°C (59°-86°F) and protect from light.

*In controlled studies, recurrences were totally prevented for 4 to 6 months in up to 75% of patients.

Burroughs Wellcome Co., Research Triangle Park, North Carolina 27709



HERE'S ONE DOCTOR WHO WON'T PAY HIS MALPRACTICE PREMIUMS THIS YEAR.



The Army covers his premiums. Since he's an Army Physician, there are a lot of worries associated with private practice that he won't have to contend with. Like excessive paperwork, and the overhead costs incurred in running a private practice.

What he will get is a highly challenging, highly rewarding experience. The Army offers varied assignments, chances to specialize, or further your education, and to work with a team of dedicated health care professionals. Plus a generous benefits package.

If you're interested in practicing high quality health care with a minimum of administrative burdens, examine Army medicine. Talk to your local Army Medical Department Counselor for more information:

MAJOR MIKE EDWARDS
(816) 891-7720

ARMY MEDICINE.
BE ALL YOU CAN BE.

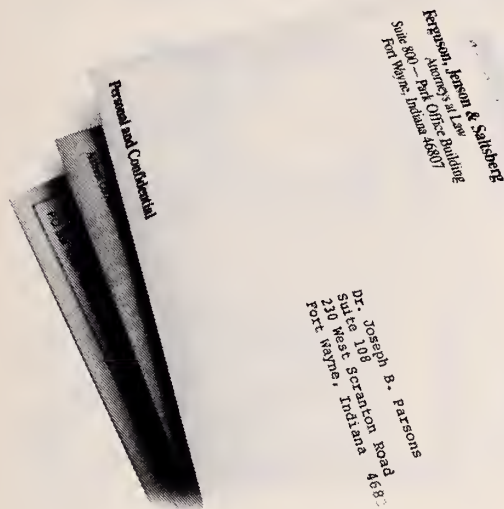
COUNCILOR DISTRICTS AND COUNTIES

- First District: Councilor: Richard B. Svehla, Omaha. Counties: Douglas, Sarpy.
- Second District: Councilor: Sushil S. Lacy, Lincoln. Counties: Cass, Lancaster, Otoe.
- Third District: Councilor: C. T. Frerichs, Beatrice. Counties: Gage, Johnson, Nemaha, Pawnee, Richardson.
- Fourth District: Councilor: Roger Massie, Plainview. Counties: Antelope, Cedar, Cumming, Dakota, Dixon, Knox, Madison, Pierce, Stanton, Thurston, Wayne.
- Fifth District: Councilor: William Chleborad, M.D., Fremont. Counties: Boone, Burt, Colfax, Dodge, Merrick, Nance, Platte, Washington.
- Sixth District: Councilor: Robert Herpolsheimer, M.D., Seward. Counties: Butler, Hamilton, Polk, Saunders, Seward, York.
- Seventh District: Councilor: Robert Quick, M.D., Crete. Counties: Clay, Fillmore, Jefferson, Nuckolls, Saline, Thayer.
- Eighth District: Councilor: Floyd H. Shiffermiller, Ainsworth. Counties: Boyd, Brown, Cherry, Holt, Keya Paha, Rock, Sheridan.
- Ninth District: Councilor: Stanley Nabity, Grand Island. Counties: Blaine, Buffalo, Custer, Dawson, Garfield, Grant, Greeley, Hall, Hooker, Howard, Loup, Sherman, Thomas, Valley, Wheeler.
- Tenth District: Councilor: David R. Little, M.D., Hastings. Counties: Adams, Chase, Dundy, Franklin, Frontier, Furnas, Gosper, Harlan, Hayes, Hitchcock, Kearney, Phelps, Red Willow, Webster.
- Eleventh District: Councilor: Donald E. Fischer, North Platte. Counties: Arthur, Deuel, Garden, Keith, Lincoln, Logan, McPherson, Perkins.
- Twelfth District: Councilor: Donald E. Wilkinson, Alliance. Counties: Banner, Box Butte, Cheyenne, Dawes, Kimball, Morrill, Scotts Bluff, Sioux.

NEBRASKA MEDICAL ASSOCIATION Councilor Districts and Component County Medical Societies COMPONENT COUNTY MEDICAL SOCIETIES

COUNTY	PRESIDENT	SECRETARY-TREASURER
Adams	Kevin Wycoff, Hastings	Richard French, Hastings
Antelope-Pierce	Kenneth Peters, Plainview	David Johnson, Osmond
Box Butte	Wendell Fairbanks, Alliance	Chris Wilkinson, Alliance
Buffalo	John Schulte, Kearney	Gerry Jensen, Kearney
Butler	Victor Thoendel, David City	Jack Kaufmann, David City
Cass	R. R. Anderson, Nehawka	Glen K. Knosp, Elmwood
Cheyenne-Kimball-Deuel	James Thayer, Sidney	Clinton Dorwart, Sidney
Cumming		Gordon Moshman, West Point
Custer	Loren Jacobsen, Broken Bow	N. Leon Books, Broken Bow
Dawson		Rodney Sitorius, Cozad
Dodge	Rod Koerber, Fremont	W. B. Eaton, Fremont
Five	Willis L. Wiseman, Wayne	Robert Benthack, Wayne
Four	Tom Martin, Ord	Otis Miller, Ord
Gage	Alan Langvardt, Beatrice	Louis J. Gogela, Jr., Beatrice
Hall	L. W. Hake, Grand Island	Gordon Francis, Grand Island
Hamilton	M. D. Jobman, Aurora	G. D. Penner, Aurora
Holt & Northwest	Melvin Campbell, Ainsworth	John Bryd, Valentine
Jefferson	Gordon O. Johnson, Fairbury	R. A. Blatny, Fairbury
Knox	D. M. Laflan, Creighton	D. J. Nagengast, Bloomfield
Lancaster	C. L. Barton, Lincoln	M. A. Breiner, Lincoln
Lincoln	Dell Shepherd, North Platte	Timothy O'Holleran, North Platte
Madison	Otto Wullschleger, Norfolk	C. Robert Adams, Norfolk
Metropolitan Omaha	Jerald R. Schenken, Omaha	F. F. Paustian, Omaha
Northeast	Robert Benthack, Wayne	C. Robert Adams, Norfolk
Northwest	Joel Hutchins, Gordon	R. H. Rasmussen, Chadron
Otoe	Dean R. Thomson, Nebraska City	Paul R. Madison, Nebraska City
Keith-Perkins-Chase	Berl W. Spencer, Ogallala	E. A. Holyoke, Ogallala
Platte-Loup Valley	Arthur Liebenritt, Columbus	Dwight Rickard, Columbus
Saline		Robert E. Tuma, Crete
Sarpy	Barbara Heywood, Papillion	Fred Schwartz, Papillion
Saunders	I. M. French, Wahoo	John E. Hansen, Jr., Wahoo
Scotts Bluff	Lowell Stratton, Mitchell	Vonn Roberts, Scottsbluff
Seward	Paul Plessman, Seward	Van Vahle, Seward
South Central	Jeff Hollis, Geneva	Chas. F. Ashby, Geneva
Southeast Nebr.	Gary Ens, Auburn	George Voigtlander, Pawnee City
Southwest Nebr.	David A. Allerheiligen, McCook	E. C. Beyer, McCook
Washington-Burt	H. Neal Sievers, Blair	K. C. Bagby, Blair
York	James D. Bell, York	Darroll J. Loschen, York

Crisis in black and white.



Your personal crisis may be waiting in the morning mail. If so, you'll want the best professional help. You'll want a Medical Protective General Agent.

Professional liability coverage is our only business. And we've been providing it for almost 100 years. Our agents live in the territories they serve so they understand the local legal climate. And with the extensive resources of the home office Law Department to draw from, they're always ready to answer your questions or give advice.

Someday it may be you against a negligence charge. When that day comes and your professional reputation is on the line, you're going to want all the help you can get. To make sure you have it, contact your Medical Protective General Agent today.

THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

L. Roger Garner

Suite 114, Corporate Plaza, 11212 Davenport, Omaha, NE 68154, (402) 334-9689

AMA News Notes

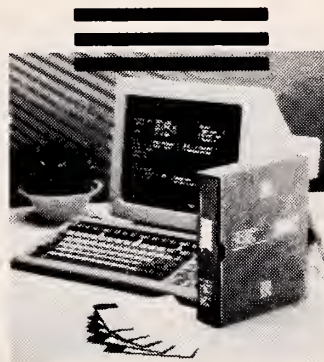
The Senate has joined the House in approving a ban on smoking aboard domestic commercial aircraft, but limited the prohibition to flights of 90 minutes or less.

Approximately 70% of all commercial flights would be affected under its proposal which was modified by agreement with a coalition of tobacco-state Members to avert a filibuster and approved by voice vote. Under the House bill, smoking would be banned on all flights of two hours or less, approximately 80% of all flights.

The measure now goes to a conference committee which will work out differences in the two bills. The smoking ban provision was added to an \$11.1 billion transportation appropriations bill (H.R. 2890) that was adopted by an 84-10 vote. Sen. Frank Lautenberg (D-NJ) spearheaded efforts for passage.

Sen. Lautenberg has pushed for a smoking ban on all flights of two hours or less and the AMA strongly supported his efforts, although

(continued on page 446)



Physicians who have thoroughly investigated their choices are selecting MDX* medical data software.

*MDX is a trademark of Calyx, Inc.

MDX

Call us about the multi-user, multi-tasking MDX system. We will send you a video tape presentation.



INFO-BUILDERS, INC.

402/331-2546
11203 JOHN GALT BOULEVARD
OMAHA, NEBRASKA 68137

Providing complete installation, training and support services.

AIM HIGH

A SPECIAL PRACTICE F O R SPECIALISTS



If you're a **Surgeon** or **OB/GYN** or **Other Medical Specialist**, the Air Force may have a special practice for you.

What makes it special? You'll enjoy an excellent pay and benefits package. There'll be more time to spend with your family. You'll receive 30 days of vacation with pay each year. And you will work with modern equipment and some of the most highly trained professionals in the world, serving your country and your patients. Now that's special!

Find out just how special your practice can be. Call

TSgt. Sisley
402-556-0715
Collect



THE NEBRASKA MEDICAL JOURNAL

By Way of Introduction

BENJAMIN R. GELBER, M.D.

I would like to thank the Board of Directors of the Nebraska State Medical Association for giving me the opportunity to become the Editor of the **Nebraska Medical Journal**. Dr. Alan Forker, who has done a superb job over the last several years, has been helping me make the transition. Dr. Frank Cole was the editor when I came to Nebraska, and he made the Journal highly entertaining. I will try to fill their shoes as your editor.

I know that we have talented photographers and artists among Nebraska physicians. Please send me some of your work. I would like to have a different cover on the Journal each month.

The **Socio-Economic and Political Forum** will be a new regular department. Dr. Charles Barton will inaugurate this with a discussion of the scope of nursing practice. This has been a hot topic locally. I will try to publish similar articles regularly. Please send me some.

Sophisticated diagnostic imaging has become available in recent years. Dr. Joe Stavas will begin a section called **Clinical Diagnostic Imaging** and will include CT scan, MR scan, and other new developments in radiology. We invite all interested physicians to submit cases for this.

I have been interested in the History of Medicine, and have been looking through the

issues of the Nebraska Medical Journals from 50 years ago. There are many well written and interesting articles of historical interest. We will reprint some of these. I invite you to send articles about medical practice years ago, biographies of prominent Nebraska physicians of bygone days, and anything else of historical interest.

We need a lively **Letter to the Editor** page. We will publish letters concerning scientific articles along with the authors' replies. We also need discussions of current and controversial issues. You all agree that there is no shortage of these.

We need review articles on medical subjects of general interest. There has been a revolution in neurosurgery over the last 10 to 15 years with sophisticated scans, microsurgical techniques, etc. Similar profound changes have occurred in other medical and surgical disciplines. I will be soliciting review articles, so that we can all keep current.

I hope that the **Nebraska Medical Journal** will be sometimes controversial, usually interesting, and always educational. I welcome your criticism. If the new features are not interesting, let me know. Send me articles, criticisms, and suggestions. I have never been the editor of a medical journal before. With your help, we can keep the **Nebraska Medical Journal** a leader among state medical journals.

The Scope of Nursing Practice

EDITOR'S NOTE

The following was presented to the Nebraska State Board of Nursing on 10/15/87 by Dr. Charles Barton.

CHARLES L. BARTON, M.D.

THANK you for your courtesy in allowing me to speak to you on such short notice. I am the President of the Lancaster County Medical Society, and I am here in the service of its mission, which is to improve the health and welfare of the community.

My remarks may be interpreted as a report from the consequences end of the State's decision-making process, as regards scope of nursing issues. It is a bad report. Pain and suffering are increased, and available care is being denied. Patients are being put at risk. Nurses are being prevented from rendering care which they are trained to render, are hesitant to initiate well-tested and effective protocols, causing delays in the initiation of critical care, which have adversely affected the patients' clinical courses; babies and children can't always have their airways maintained as effectively as in the past, resulting in cerebral hypoxia, and in time, will assuredly result in mental retardation and some deaths.

There is a delay in some cases in starting arterial lines, which are necessary for critical care unit nurses to monitor patients' responses to Nitroglycerin, or to Dopamine drips. Critical care unit nurses tell me they now sometimes hesitate to initiate protocols for treatment of cardiac arrhythmias, administration of intravenous Lidocaine, or cardioversion, that they can't do synchronized cardioversion at all, that when non-synchronized cardioversion is attempted for patients with tachycardia, the rhythm is sometimes converted to ventricular fibrillation, which is fatal unless converted by another cardioversion.

The consequences of these administrative and legal decisions concerning such "scope of nursing" issues to the nurses themselves are equally negative. Critical care nurses feel deprofessionalized, and demoralized when the State of Nebraska, based on administrative, legal, and bureaucratic concerns, prevents them from rendering the standard of care they

are trained and competent to render, based on **medical** expertise. It seems to them (and to me), that the legal or administrative tail is wagging the professional dog.

This situation is apparently the result of the current interpretation of the Nebraska Scope of Nursing Laws, and I know that neither you nor I make those laws; but I also know that if this assessment of the situation is correct, then we will all have to pitch in with an effort to change the law or its interpretation in favor of the patients.

The State of Ohio Law concerning Scope of Nursing Practice, which was passed in 1985, begins with the following paragraph: "The General Assembly recognizes that nursing is a dynamic field, based on evolving scientific principles and continually expanding to include more sophisticated patient care activities. It is the intention of the General Assembly in Chapter 4723. of the Revised Code, to provide clear legal authority for functions and procedures that have common acceptance and usage, to recognize the existence of overlapping functions between physicians and registered nurses, and to permit additional sharing of functions between physicians and registered nurses through appropriate delegation and collaboration."

Now **that** represents reality in the second half of the twentieth century, and is pro-patients. The Nebraska Scope of Nursing Law dates from 1927.

We can't change the law today. But we can consider the profession of nursing and its scope from the perspective of patient care, in the spirit of promoting the patients' health and welfare to which, above all other things, we nurses and physicians are committed.

The Nebraska State Law (71-1, 132.05, paragraphs 3 and 4) reads as follows:

"(3) The practice of nursing shall mean the performance for compensation or gratuitously

of any act expressing judgment or skill based upon a **systematized body of nursing knowledge**. Such acts shall include the **identification of and intervention in actual or potential health problems** of individuals or groups. **These acts are directed toward maintaining health status**, preventing illness, injury, or infirmity, **improving health status, providing care supportive to or restorative of life and well-being through nursing assessment** and through the execution of nursing care, **and through the execution of diagnostic or therapeutic regimens of duly licensed practitioners authorized to so order such regimens** under the provisions of sections 71-173, 71-183, 71-1,102, and 71-1,137.

(4) The practice of nursing by a registered nurse shall mean assuming responsibility and accountability for those nursing actions which include **but are not limited to:**

- (a) **Identifying human responses to actual or potential health conditions;**
- (b) **Deriving a nursing diagnosis which identifies the needs of an individual, family, or group;**
- (c) **Executing a nursing treatment regimen through the selection, performance, and management of proper nursing practices;**
- (d) Teaching health care practices.
- (e) Advocating the provision of health care services through collaboration with other health service personnel;
- (f) **Executing diagnostic and therapeutic regimens prescribed by duly licensed practitioners authorized to so order such regimens under the provisions of sections 71-173, 71-183, 71-1,102, and 71-1,137."**

Consider the act of airway intubation by a registered nurse. Such act clearly includes "the identification of and intervention in (the) actual or potential health problems" of an individual. This act is very clearly directed toward maintaining health status, toward improving health status, toward providing care supportive to or **restorative of life and well-being**, through **nursing assessment**, and through the execution of nursing care. It is also directed toward maintaining health status

through the "execution of diagnostic or therapeutic regimens of duly licensed practitioners authorized to so order such regimens" by virtue of the fact that intubation of the airway of a patient in a critical care unit is carried out by registered nurses by medical protocols which have been developed by the medical and nursing staffs. The intubation of a patient's airway by a registered nurse seems also to fit very nicely with paragraph (4) (f) in as much as this act comprises "executing diagnostic and therapeutic regimen(s) prescribed by duly licensed practitioners authorized to so order such regimens."

I suppose that one could argue that intubating a patient's airway is not part of a "systematized body of nursing knowledge" but this argument does not hold water on two major accounts. The first is that the "systematized body of nursing knowledge" is not spelled out in the statute. The second reason has to do with nursing and medical education. Although the education and training of registered nurses and physicians are not identical, they parallel each other, and arrive at the same "body of knowledge" at the point of application to the patient in a critical care unit. The knowledge and skill required to assess a poor airway, determine that intubation, is necessary to improve the patient's situation, and to carry out the intubation, are not automatically acquired with conferral of the RN degree, any more than are the knowledge and skill to perform an appendectomy or to do brain surgery automatically acquired with acquisition of the M.D. degree. In both cases, further training is required, and in both cases, further training is acquired; physicians, through medical residencies in specialties, registered nurses through training conducted by the physicians in charge of the specialty units. Intubation, in this example, is therefore, acquired by education, training, and supervised practice. The indications for these procedures are defined by protocols which have been developed over time by medical and nursing staffs, tested, found to be effective, monitored as to outcome, approved by the medical staffs and the boards of trustees of the hospitals themselves. Quality and availability of care are enhanced. The patients benefit. Yet, at the present time, trained registered nurses cannot intubate, in spite of the fact that physicians occasionally ask them to do so

because, in their judgment, the nurse, by training and experience, is more adept at this acquired skill than is the physician himself. But such a trained RN is currently proscribed from intubating, while advanced Emergency Medical Technicians, with 240 total hours of training beyond high school, can. This doesn't make sense, and it is the **patient** who suffers the consequences.

So the second reason that intubation of a patient should not be considered to be outside the "systematized body of nursing knowledge" is that intubation by nurses in these critical care situations has evolved, with quality controls, as the standard of practice in the State of Nebraska. Further evidence for this argument is found in a Nebraska Hospital Association study, completed prior to the Board of Nursing's ruling that intubating is outside the scope of nursing practice, which found that nurses were intubating patients in 17 hospitals in Nebraska. It is apparent that this sudden re-interpretation of the State Scope of Nursing Law has the effect of lowering the standard of care rendered to patients in those 17 hospitals - very clearly a regressive, anti-patient action.

I think that the case for the procedures in question to be considered "part of the systematized body of nursing knowledge" is clear. Yet I recognize that the opposite case can be made. We nurses and physicians cannot resolve this apparent dilemma if it is a matter of state law. The ultimate resolution rests, therefore, with the legislators. But what we **can do**, is to **unwaiveringly, stand by our commitment to relieve pain and suffering and to promote the health and welfare of the community by rendering the available modern-day nursing and medical care for the benefit of the patient, now**, and approach the legislative solution, if necessary, as soon as possible.

I'm, therefore, requesting of the State Board of Nursing, on behalf of the patients, the nurses and the physicians of our community, an action defining these currently proscribed nursing procedures as a part of the "systematized body of nursing knowledge," recognized by State Law, and leave it to the legislature, if necessary, to bring the law into the twentieth century. Meanwhile, let's take care of the patients.

We need to go public with this today, so the nurses across the state **know** what they can do and what they can't do; so that nurses are free to take action to save lives, without the current fear that the saving of the life itself may be illegal(!); so that the people of this state know that they have access to the same high quality of health care they enjoyed prior to all this fuss about the scope of nursing; and so that the people of this state know that the Board of Nursing which serves them stands four-square in favor of availability of modern, 1987-type care to the patients; and so that the Board is not perceived as responsible for regression of the quality of care to the level rendered in the 1950's.

I, therefore, specifically request that the Board of Nursing move, second, discuss, and pass a motion that this list of procedures which have been proscribed, some in closed session and unpublicized, and some in open session and publicized, be declared to be within the scope of practice of registered nurses.

ACTION BY THE STATE BOARD OF NURSING CONCERNING THE SCOPE OF NURSING

- I. Procedures determined to be beyond the scope of the registered nurse as reflected in the State Board of Nursing Meeting minutes.
 - Instilling antibiotic medication through a chest tube.
 - Performance of an emergency episiotomy
 - Emergency cardioversion
 - Rupturing membranes
 - Removal of an umbilical catheter, except as an emergency procedure
 - Endotracheal intubation
 - Application of internal fetal scalp electrodes
 - Advancement of a Swan-Ganz Catheter
 - Administration of xylocaine as a local anesthetic
 - Needle aspiration for a pneumothorax
 - RN may not direct paramedic personnel to initiate an IV or perform emergency intubation
 - RN may not administer or monitor the direct effects of an epidural anesthetic
- II. The following procedures have been determined by the Board of Nursing on May 15, 1986, in a closed meeting as acts which are beyond the authorized scope of the registered nurse.
 - Endotracheal Intubation
 - Administration of nitrous oxide as an analgesic
 - Suturing
 - Electrocautery
 - Stapling
 - Performance of an escharotomy
 - Tissue punch biopsy for a wound culture
 - Debridement of wounds with an electric or air powered dermatome
 - Insertion of subclavian lines
 - Insertion of arterial lines

Management of the Sexual Assault Victim

SEXUAL assault has long been of medical, social and legal concern. The recent interest shown by the publications of the American Medical Association and the American College of Obstetricians and Gynecologists is well timed.^{1,2} Even though neither the State of Nebraska nor Douglas County keeps the statistics, the Douglas County Attorney's office states that child assault cases may constitute as many as half of all the reported cases of sexual assault. Two hundred eighty-one sexual offenses were reported to the Omaha police in 1986. One hundred four of these were forcible rapes. Two hundred sixty-five were determined to be actual offenses. One hundred seventy-seven persons were charged with sex offenses other than forcible rape and prostitution.³ Because of the magnitude and importance of the problem, a concise informative protocol is needed statewide to assist physicians in performing an adequate evaluation and providing optimal treatment and followup for the sexual assault victim.

A complete guide to the management of sexual assault would be not only lengthy but controversial. This review is an attempt to provide an outline and a basic description of this important area that is of concern to all physicians. No specific courses of action will be described for the psychological care of the victim and no reasons for the actions against the victims will be given. The context of the article will focus mainly on legal definitions and the explanation for the medical course of action.

Many of the specimens recommended to be obtained are listed in a "rape kit" provided by Lancaster, Sarpy, and Douglas Counties. The model NEB-100 sexual assault kit can be purchased from Sirche Finger Print Laboratories, P.O. Box 30576, Umstead Industrial Park, Raleigh, North Carolina 27622; the phone number is (919) 781-3120.

The Law

In order to get a good understanding of what to look for and how to describe a sexual

ROBERT J. FAGNANT, M.D.
GAYLE A. RUSSELL, R.N., BSN
GILLES R. G. MONIF, M.D.

Department of Obstetrics and Gynecology, Creighton University School of Medicine, Omaha, NE 68131

assault case, the laws pertaining to the definition of sexual crimes need to be known. Sexual assault crimes are usually defined by state laws. Many states have similar laws, but they may vary in some important concepts.

Nebraska statutes divide sexual assault into four categories, described below.⁴ Several terms in the following statutes need to be defined. The **actor** is the person accused of sexual assault. **Serious personal injury** occurs when great bodily injury or disfigurement, extreme mental anguish or mental trauma, pregnancy, disease, or loss or impairment of a sexual or reproductive organ occurs. **Sexual penetration** is described as sexual intercourse, or any intrusion, however slight, of any part of the actor's body or any object manipulated by the actor into the genital or anal openings of the victim's body which can be reasonably construed as being for nonmedical or nonhealth purposes. Sexual penetration shall not require emission of semen. **Sexual contact** is the intentional touching of the victim's sexual or intimate parts or the intentional touching of either the victim's clothing covering the immediate area of the victim's sexual or intimate parts. Sexual contact shall also mean the touching by the victim of the actor's sexual or intimate parts or the clothing covering the immediate area of the actor's sexual or intimate parts when such touching is intentionally caused by the actor. Sexual contact shall include only such conduct which can be reasonably construed as being for the purpose of sexual arousal or gratification of either party.⁴

First degree sexual assault: (1) Any person

who subjects another person to sexual penetration and (a) overcomes the victim by force, threat of force, express or implied, coercion, or deception, (b) knew or should have known that the victim was mentally or physically incapable of resisting or appraising the nature of his or her conduct, or (c) the actor is 19 years of age or older and the victim is less than 16 years of age, is guilty of sexual assault in the first degree.

Second degree sexual assault: Any person who subjects another person to sexual contact and (a) overcomes the victim by force, threat of force, express or implied, coercion, or deception, or (b) knew or should have known that the victim was physically or mentally incapable of resisting or appraising the nature of his or her conduct is guilty. **The actor shall have caused serious personal injury** to the victim.

Third degree sexual assault: This differs from second degree sexual assault in that the **actor shall not have caused serious injury** to the victim.

Sexual assault of a child: A person commits sexual assault of a child if he or she subjects another person 14 years of age or younger to sexual contact and the actor is at least 19 years of age or older.

Sexual Assault Protocol

- A. Initial Overall Inspection: Emotional and physical condition of the patient and those accompanying him/her.
- B. Consent for Examination: From victim and guardian if a minor.
- C. History
 1. History of present illness: Document all times as accurately as possible. Note the time of initial contact with actor(s); time of initial and most recent sex act with actor(s); duration of each sex act; time of last "voluntary" sex act if ejaculation occurred; period of time between examination and sexual contact; what the patient did during this interval (i.e. bathe, douche, change clothes, etc.); number of actors and identification of actors, if possible.
 2. Past medical history: Current medications (including oral contraceptives); allergies; surgeries; prior illness (includ-

ing sexually transmitted diseases); recent trauma, menstrual history (menarche, last menstrual period, cycle length, regularity of cycles).

3. Review of systems.
4. Family history: Special attention to family structure and support systems.
- D. Physical examination: Inspect clothing before and after removal from patient. Special attention should be given to evidence of trauma. Pelvic examination should note any bruises, inflammation, fissures, tears, bleeding, tone of sphincter muscles. Describe the state of the hymen. Include rectal examination.
- E. Collection of specimens: Specimens obtained using the NEB-100 Sexual Assault Kit: saliva; smears and swabs of vagina, rectum, and pharynx; fingernail scrapings; head hair combings; plucked head hair standard; pubic hair combing; plucked pubic hair standard; blood for standard. Specimens or tests recommended but not included in the kit: Vaginal wash for motile spermatozoa or inflammatory cells; gonorrhea cultures (cervical, rectal, pharyngeal), chlamydia cultures (cervical, rectal); VDRL or RPR; serum pregnancy chlamydia cultures (cervical, rectal); VDRL or RPR; serum pregnancy test; offer HIV, HBSAg, and Herpes simplex virus titers.
- F. Counseling: Offer counseling before release. Women Against Violence crisis hotline phone number is (402) 345-7273.
- G. Treatment:
 1. Consent for treatment.
 2. Postcoital contraception.

No drug has FDA approval for this. First dose within 72 hours of rape.

 - a. Ovral: two orally and two orally in 12 hours.⁵
 - b. DES (diethylstilbesterol): 50 mg. orally each day for five days.⁶
 - c. Premarin (conjugated estrogens); 25 mg. IV each day for three days or 10 mg. orally three times daily for five days.^{7, 8, 9}
 - d. Ethinyl estradiol: 5 mg. orally each day for five days.⁹Anti-emetic regimens offered. Compazine 10 mg. orally with each dose.

3. *Neisseria gonorrhoeae* prophylaxis: Ceftriaxone (Rocephin) 250 mg. IM or probenid 1 gm. orally followed in 30 minutes by aqueous penicillin G 4.8 million units IM.¹⁰
 4. Chlamydia prophylaxis: Tetracycline hydrochloride 500 mg. orally four times a day for 14 days or doxycycline 100 mg. orally twice a day for seven days, or erythromycin 500 mg. orally four times a day for seven days.¹¹
 5. Syphilis prophylaxis: Probenid 1 gm. orally followed by aqueous penicillin G 4.8 million units IM.¹², or Doxycycline 300 mg. orally followed by 300 mg. one hour later.¹¹
 6. Tetanus toxoid: 0.5 cc subcutaneously if due for booster.¹³
 7. AIDS, Herpes prophylaxis: None known. Betadine (povidone iodine) douche may be beneficial.
- H. Written Report: Dictate if possible. Complete as soon as examination performed. Supplement with pictures or drawings if this clarifies report.
- I. Notification of authorities: This is a state law. County sheriff's department must be notified, unless assault occurs in Omaha or Lincoln; then notify respective city police.
- J. Followup:
1. Immediate: Social and psychological evaluation and support.
 2. Two days: Medical (culture results and treatment, if necessary).

3. Two weeks: Medical (repeat cultures, if necessary; document first normal menses after assault); psychological.

K. Judicial process: Be prepared to give deposition and testify in court.

References

1. Riesenber D. Treating a Societal Malignancy - Rape. JAMA 257:726, 1987.
2. Sexual Assault, American College of Obstetricians and Gynecologists. ACOG Technical Bulletin 101:1, 1987.
3. Crime Comparison Report, 1985 Omaha Police Division.
4. Nebraska Revised Statutes; sections 28-711 and 28-902, 1985.
5. Yuzpe AA, Percival-Smith R, et al. A multi-centre clinical investigation employing ethinyl estradiol combined with dl-norgestrel as a postcoital contraceptive agent. Fertil Steril 37:508, 1982.
6. Hospels AA. Interception: postcoital estrogens in 3,016 women. Contracep 14:375, 1976.
7. Cook CL, Wiist LJ, et al. Pregnancy prophylaxis: parenteral postcoital estrogen. Obstet Gynecol 67:331, 1986.
8. Fischer RG. Postcoital contraception. Pediatr Nurs 11:384, 1985.
9. Dixon GW, Schlesselman JJ, et al. Ethinyl estradiol and conjugated estrogens as postcoital contraceptives. JAMA 244:1336, 1980.
10. Division of Sexually Transmitted Diseases: 1985 STD Treatment Guidelines, U.S. Department of Health and Human Services, 1985.
11. Hicks, DJ. Sexual battery: management of the rape victim. Gynecology and Obstetrics, Sciarra ed. Volume 6: Chapter 96: 1, 1986.
12. Massey JB, Crespo-Ramon G, et al. Management of sexually assaulted females. Obstet Gynecol 38:29, 1971.
13. Hicks D. Rape: sexual assault. Am J Obstet Gynecol 137:931, 1980.

X-RAY OF THE MONTH

Arteriovenous Malformation of the Brain

THIS 52 year old male went to his physician with recurrent episodes of "flashing" lights, tunnel vision, and diminished visual acuity of the right eye with subsequent mild occipital headache. These symptoms had been present for the last three years. On the day of admission to the hospital, he also noted difficulty with speech and weakness in both legs which lasted for 30 minutes.

Neurological exam performed several hours after the above described episode was within normal limits. CAT scan and cerebral arteriography were performed soon after admission (Figures 1 & 2).

What is your diagnosis?

ZBIGNIEW K. WSZOLEK, M.D.*

Chief Resident, Neurology, University of Nebraska School of Medicine

EDWARD J. SCHIMA, M.D.

Clinical Associate Professor, University of Nebraska School of Medicine

JAMES J. PHALEN, M.D.

Chief, Radiology Service, VA Medical Center, Omaha, NE

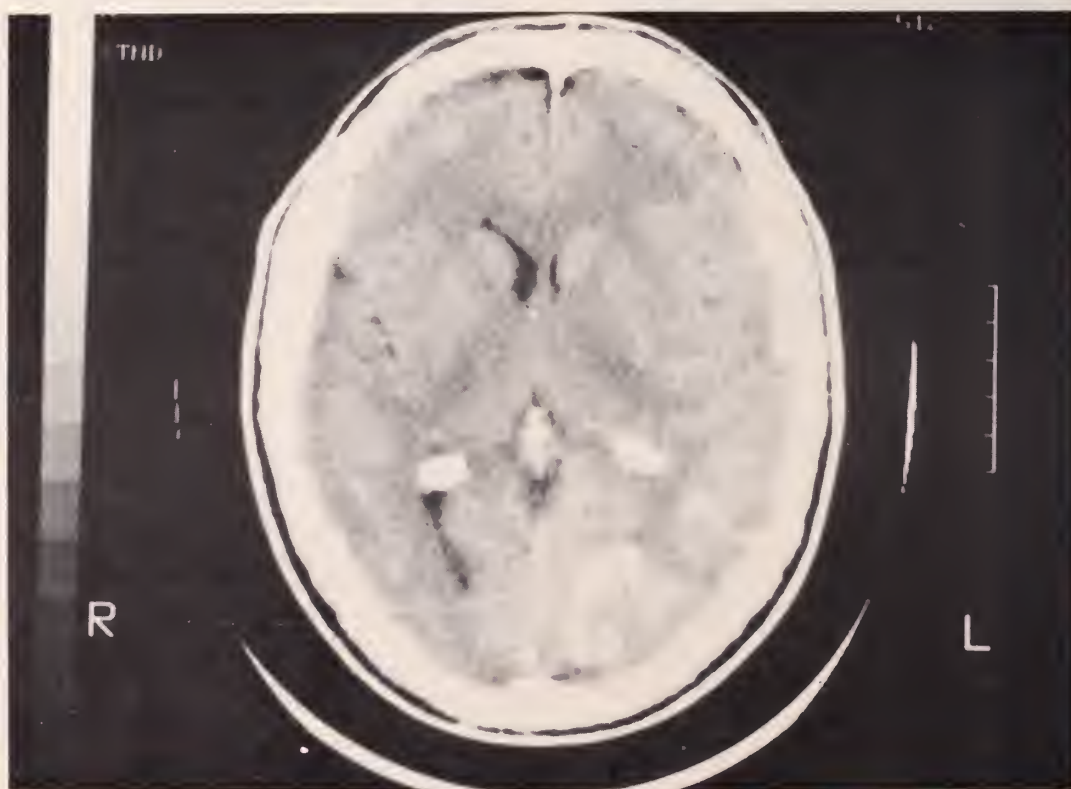


FIGURE 1

*Reprint request: Zbigniew K. Wszolek, M.D., Chief Neurology Resident, University of Nebraska Medical Center, Department of Internal Medicine, Section of Neurology, 42nd & Dewey Avenue, Omaha, NE 68105.

ARTERIOVENOUS MALFORMATION - LEFT OCCIPITAL AREA

The term arteriovenous malformation (AVM) refers to the fetal developmental anomalies in which abnormal connections form between the arterial and venous system with concomitant shunting.¹ This condition was known to the ancient Egyptians as early as 1500 B.C.² Several clinical reports and even small series of cases were published even before the introduction of cerebral angiography in 1927. This modality revolutionized our knowledge about AVM's and their nature.^{1, 2} Since that time, there have been multiple publications describing symptomatology, diagnostic difficulties, and the various modalities used in the diagnosis of AVM.¹⁻⁴



FIGURE 2

AVM's usually present as a conglomerate of multiple dilated and tortuous vessels which have been referred to as a "bag of worms". Microscopically, there are numerous inter-connecting vessels of varying size with

underdeveloped walls. Neuronal tissue with degenerative changes and gliosis is found around and along the borders of the AVM's. Calcifications and hemosiderin accumulation are also frequently seen.^{1, 2}

Clinical presentation of AVM's includes bleeding which may be parenchymal and/or subarachnoid (68-72%), seizures (18-25%), focal neurological symptoms (7%), and headaches (5-35%).⁵

The natural history of non-operated AVM's varies. There is about 40% risk of hemorrhage, 29% chance of death, 18% risk of epilepsy. One patient in four will have a significant neurological handicap 20 years after diagnosis.³ AVM's have a tendency to grow and spontaneous enlargement is estimated to be in a range of 0.2 - 2.8% per year.⁶

Therapeutic management includes excision - total, if possible, embolization, and conservative therapy for epilepsy and headache control.^{1, 2, 4}

CT or MRI may be helpful in screening or in the diagnosis of small, cryptic AVM's especially in the cerebellum or brain stem. Arteriography remains the "gold standard" in diagnosis.

References

1. Lagos JC: Congenital aneurysms and arteriovenous malformations. In: Vinken PJ, Bruyn GW, Handbook of clinical neurology. Elsevier/North-Holland Biomedical Press, Amsterdam, The Netherlands, 1977, vol 31: 137-209.
2. Pool JL: Arteriovenous malformations of the brain. In: Vinken PJ, Bruyn GW, Handbook of clinical neurology, North-Holland Publishing Company, Amsterdam, The Netherlands, 1972, vol 12:227-266.
3. Crawford PM, West CR, Chadwick DW, Shaw MDM: Arteriovenous malformations of the brain: natural history in unoperated patients. *J Neurol Neurosurg Psychiatry* 49:1-10, 1986.
4. Drake CG, Friedman AH, Peerless SJ: Posterior fossa arteriovenous malformations. *J Neurosurg* 64:1-10, 1986.
5. Rigamonti D, Spetzler RF, Johnson PC, Drayer BP, Carter LP, Ueda T: Cerebral vascular malformations. *BNI Quarterly* 3:18-28, 1987.
6. Mendelow AD, Erfurth A, Grossart K, Macpherson P: Do cerebral arteriovenous malformations increase in size? *J Neurol Neurosurg Psychiatry* 50:980-987, 1987.

CASE OF THE MONTH

Newborn with Macrocephaly

CLINICAL HISTORY:

Three month old infant with a normal prenatal period and uncomplicated vaginal delivery. Enlarging head circumference noted on follow-up well baby exams with subtle delay of head lifting and turning milestones.

JOE STAVAS, M.D.

Computed tomography or cranial sonography should be the initial imaging exam for macrocephaly (large head) in the neonate. In general, CT is the more popular exam in older infants and children since the anterior fontanelle may not provide an adequate ultrasound scanning window. (Type and availability of ultrasound or CT equipment may be additional limiting factors in exam choice.)

Magnetic Resonance Imaging (MRI) offers improved multiplanar anatomic detail (especially in the posterior fossa) and better sensitivity with certain lesions (ie. blood and some tumors). MRI is ideal for congenital malformations as they are easily characterized by their anatomic features. Another advantage is the nonionizing nature of the exam, an appealing factor for children who may be

subject to numerous follow-up exams. The length and cost of MR exams are relative disadvantages and child sedation is required in most instances. MRI units are currently available in Lincoln and Omaha. I prefer CT or Ultrasound in conjunction with MRI for macrocephaly evaluation.

The underlying etiology of macrocephaly is usually discovered by the above imaging techniques and may be due to hydrocephalus (obstructive versus nonobstructive), neoplasms, extraaxial fluid collections, or rarely storage diseases. The latter can not be discerned by CT, Ultrasound, and as yet MRI with great confidence. Megalencephaly, or oversized brain, a rare and poorly understood anomaly, is a diagnosis of exclusion.

Increasing serial head circumference was a key clinical sign in this case and initiated a head CT and MRI. The CT shows dilated lateral and third ventricles and a normal sized fourth ventricle (figure 1 and 2) placing the lesion at the aqueduct or periaqueductal region. Sagittal MRI (figure 3) better defines cistern morphology and clearly shows an occluded aqueduct as well as partial agenesis of the corpus callosum. Coronal MRI (figure 4) depicts the communicating, widely placed lateral ventricles and elevated third ventricle.

This child has aqueductal stenosis, a form of obstructive hydrocephalus. It may be congenital or acquired. The congenital type results from inadequate secondary enlargement of the aqueduct, which normally occurs after the sixth month of fetal gestation. The aqueduct may become obstructed or stenosed with the formation of multiple small channels and often associated with the Chiari II malformation.



FIGURE 1
CT scan at level of dilated lateral ventricles.

Some believe this may be an x-linked recessive condition.

The more common type is the acquired form which is usually due to in utero infection

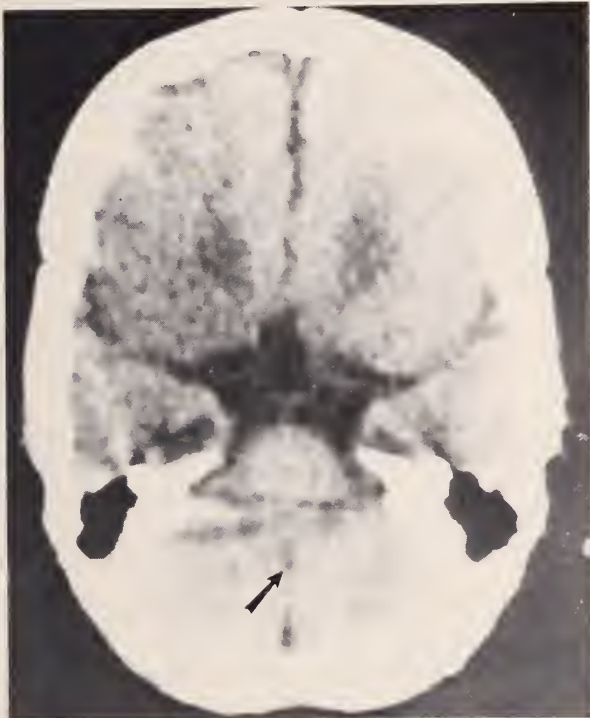


FIGURE 2
CT scan at level of fourth ventricle (arrow).



FIGURE 3
Sagittal midline MRI. (Arrowheads) aqueduct of Sylvius. (Arrows) diminutive corpus callosum.

(TORCH complex) or subarachnoid hemorrhage. Gliosis in and around the aqueduct is the microscopic finding and many times neither a bleeding episode nor maternal infection can be documented. A key diagnostic pitfall is that subarachnoid hemorrhage or infection may cause obstruction to CSF flow at multiple levels including the aqueduct.



FIGURE 4
Coronal MRI through dilated lateral and elevated third ventricles.

Ventricular shunting remains the treatment of choice and in general the prognosis of infantile hydrocephalus is significantly improved with this procedure. If left untreated 50 to 60% of infants may die secondary to their underlying disorder or intercurrent illness. With good neurosurgical and medical management at least 90% of shunted children can be expected to live beyond infancy. Intelligence and motor development will vary in each case and is heavily dependent upon associated CNS abnormalities, particularly the presence of myelomeningoceles.

Close head circumference follow-up and

brain imaging with CT and MRI are the key clinical points in this case of aqueductal stenosis.

Case courtesy of Jon J. Hinrichs, M.D., Lincoln

References

1. Behrman RP, Vaughan VC: The Nervous System. In: Nelson's textbook of Pediatrics, 13th edition. Philadelphia: W.B. Saunders, 1987.
2. Drachman DA, Richardson EP: Aqueductal Narrowing, Congenital and Acquired. ARCH Neurol 1961; 5:552.
3. Ignelzi RJ, Kirsch WM: Followup Analysis of Ventriculoperitoneal and Ventriculoatrial Shunts for Hydrocephalus. J Neurosurg 1975; 42:679.
4. Mori K: Anomalies of the Central Nervous System. Neuroradiology and Neurosurgery. New York: Thieme-Stratton Inc., 1985.
5. Naidich TP, Zimmerman RA: Common Congenital Malformations of the Brain. In: Brant-Zawadzki M, Norman D, Eds. Magnetic Resonance Imaging of the Central Nervous System. New York: Raven Press, 1987.
6. Timmons R, Johnson K: Aqueductal Stenosis and Hydrocephalus After Mumps Encephalitis. NEJM, 1970; 283: 1505.
7. Urich H: Malformations of the Nervous System, Perinatal Damage and Related Conditions in Early Life. In: Blackwood W, Corsellis J, Eds. Greenfields Neuropathology, Third edition. Chicago: Yearbook Medical Publishers, Inc., 1976.

President's Page

NEBRASKA MEDICAL ASSOCIATION NEBRASKA FOUNDATION FOR MEDICAL CARE - THE SUNDERBRUCH CORPORATION NEBRASKA

There is much confusion in the minds of the physicians of Nebraska as to the relationship of the Nebraska Medical Association and the Nebraska Foundation for Medical Care and The Sunderbruch Corporation - Nebraska. I will, therefore, try to clarify this in the following discussion.

Let me say to start with, there is still considerable confusion in my mind after discussing this with such authorities as Dr. Herb Reese, Mr. Bill Schellpeper, and Mr. Ken Neff. But, I will try to sort out a few of the facts for you.

The Nebraska Foundation for Medical Care was first founded in 1974 to be the agency dealing with the federally-mandated PSRO. As I am sure you all know, Nebraska never activated a PSRO and hence, the Nebraska Foundation for Medical Care did not function until 1984. In 1983, the House of Delegates, by a close vote, voted to participate in the federally-mandated professional review organization (PRO). The Nebraska Foundation for Medical Care was revised in 1984 and submitted and obtained the contract from HCFA for administration of the PRO. The Nebraska Foundation for Medical Care and the NMA had no experience, computers, or personnel to administer the PRO contract and a contract was sublet to the Kansas Foundation for Medical Care. The program was administered for the following two years by the Kansas Foundation for Medical Care under this subcontract. This system worked moderately well. It introduced all of us to an unpalatable but mandated PRO. One of the big flaws in this arrangement was the fact that there was some lack of administrative continuity. The staff of the PRO in Lincoln never quite knew who was their boss. When it came contract time in 1986, HCFA mandated that there would be no further subcontracting permitted as had been done in the first two years of the PRO. Nebraska still had no



L. Dwight Cherry, M.D.

expertise or computer backup to bid directly for the contract with HCFA starting in October of 1986. Thus, the Iowa Foundation for Medical Care submitted a bid for the PRO for Nebraska. Two other bids were also submitted. In the bid that the Iowa Foundation for Medical Care submitted, it was designated that The Sunderbruch Corporation would be the overall administrative body and that The Sunderbruch Corporation - Nebraska would be the administrative body for Nebraska. Incidentally, The Sunderbruch Corporation is an Iowa corporation with a letter filed with the Secretary of State of Nebraska specifying that this Iowa corporation plans to do business in Nebraska. Contrary to what you may have heard, there is no such thing as a Nebraska corporation of The Sunderbruch Corporation - Nebraska. It is purely an administrative body of The Sunderbruch Corporation to administer the Nebraska PRO.

With these few basic facts in mind, I will try to explain at least some of the confusion that has arisen in the minds of many physicians, including your President. The Nebraska Foundation for Medical Care, as originally organized and revised in 1984, had a Board of Directors appointed by the Nebraska Medical

Association. The officers and councilors of the Nebraska Medical Association were on this board and the executive director of the Nebraska Medical Association was the executive director of the Nebraska Foundation for Medical Care. Thus, there was strong interaction between the two corporations. As unhappiness arose with the federally-mandated PRO, there was a vocal minority of the Nebraska Medical Association who objected to this "cross-over" relationship between the Nebraska Medical Association and the Nebraska Foundation for Medical Care. A poll of the membership was conducted in the summer of 1986 at the direction of the House of Delegates asking the members their feelings as to this "cross-over" between the officers of the two organizations serving on both boards. Approximately 28% of the members felt there should be no "cross-over" between the two organizations. Approximately 13% had no opinion, and approximately 59% felt that the "cross-over" was an ideal arrangement so that the Nebraska Medical Association could have some "control" over the activities of the Nebraska Foundation for Medical Care and hence over the PRO. In the summer of 1986, the Board of Directors of the Nebraska Medical Association voted to discontinue the "cross-over" between the Board of the Nebraska Medical Association and the Board of the Nebraska Foundation for Medical Care. It was decided that the Councilors could serve on the Board of the Foundation for Medical Care or select someone to serve in their stead. This brings us to the decision to separate the two boards. The Articles of Incorporation of the Nebraska Foundation for Medical Care were never revised to show a separation.

After the Iowa Foundation for Medical Care received the contract for the PRO, the Nebraska Foundation for Medical Care Board rarely met. They have not functioned except to advise The Sunderbruch Corporation - Nebraska in the selection of physicians on two very important committees, the Comprehensive Review Committee and the Quality Assurance Committee. During this period of time, unhappiness with the PRO among physicians has definitely increased. It is extremely difficult to tell how much of this discontent is due to HCFA-required harassment of the physicians and how much is due to the administration by The Sunderbruch Cor-

poration - Nebraska. At least it is safe to say that discontent has markedly increased.

The first year of the contract between HCFA and the Iowa Foundation for Medical Care for the PRO in Nebraska is just now finishing and work will start in January for the next two-year contract period. The Sunderbruch Corporation - Nebraska is anxious that the Nebraska Foundation for Medical Care be reactivated with a strong board in order that they may aid in planning for the next two-year period. This board will decide policies and conditions of the contract to the limited extent that HCFA permits any local decisions. The Sunderbruch Corporation - Nebraska would be the administrative body. It is not clear in my mind what the alternative would be if the Nebraska Foundation for Medical Care was not activated. This discussion now comes to the activity of the House of Delegates at the Fall Session, 1987.

Reference Committee #1 worked extremely hard and long on the relationship between the Nebraska Medical Association, the Nebraska Foundation for Medical Care and The Sunderbruch Corporation - Nebraska. There was much discussion from the floor in the reference committee and from the floor in the second session in the House of Delegates. Some of this discussion produced more heat than light, but in general, it was, in my opinion, constructive. The reference committee recommended two things: (1) the reference committee recommends that the NMA not dissolve or disassociate itself from the NFMC; (2) it also recommends that the NMA Board of Directors appoint the Board of Directors of the NFMC.

Considerable discussion followed these recommendations. One delegate thought the House did not have enough information to make an informed decision at this time, and moved to refer this matter to the Board of Directors for clarification of these points and to report back. This action was approved by the House. In my opinion, this was a legislative maneuver, perfectly legal, to prevent the House from making a decision at that time, and it will be carried out.

This paper is being written before the Board has acted on this matter, even though it will be published in the Journal after the Board has met.

To amplify the action of the reference committee and the House of Delegates, I refer you to the minutes of the Fall Session, 1987, House of Delegates, which appear in this same issue of your Journal.

I hope this discussion has clarified your thinking in the relationship of the Nebraska Medical Association, the Nebraska Foundation for Medical Care, and The Sunderbruch

Corporation - Nebraska. It would be inappropriate for me to suggest what the action of the Board will be at their November meeting, but I can assure you that it will be given deep consideration.

Respectfully submitted,
L. Dwight Cherry, M.D.,
President



The Auxiliary

AUXILIARY PRESIDENT'S MESSAGE

Attending the Leadership Confluence always results in fresh inspiration and enthusiasm for each county and state leader present. This year's program, with emphasis on "Effective Programming for Quality Meetings", "Communication", "Motivation and Leadership", "Listening", and "AMPAC" was no exception. New ideas for improving our skills as leaders were presented in every session. In addition, Auxiliary videos, tapes and materials were on display. These are available from your state officers, and from the National office. I strongly encourage you to inspect the vast inventory of materials available and to use them in your local auxiliary workshops, programs, and seminars.

Those attending Confluence I, October 18-20, 1987 in Chicago and representing Nebraska were Desta Osborne, State President-Elect, Lynn Cronk, County President-Elect (Hall), Donna Stone, County President-Elect (Lancaster), and myself. Report from the County representatives are included below.

October 27, 1987 was the date selected for the North Central Regional Conference in Des Moines, Iowa. Co-sponsoring this one-day event were the Medical Auxiliaries of Kansas, Missouri, Nebraska, and Iowa. The conference focused on increasing MEMBERSHIP, developing LEADERSHIP, enhancing LEGISLATIVE efforts, and information concerning HEALTH PROJECTS.

The Nebraska Auxiliary was responsible for

the area of "Health Projects". With our National President, Betty Szewczyk, encouraging efforts relevant to Adolescent Health, we selected the topic of "Teen Suicide" to be stressed during this meeting.

Dr. Richard Galusha, Coordinator of Psychological Services for the Omaha Public Schools, presented an informative session on the "Signs and Symptoms of Suicide", with particular emphasis on the teen population. He noted that "every 1.1 seconds, a teenager attempts suicide", and "every 80 minutes, one is successful". These startling statistics highlight the urgency of this nationwide problem.

Dr. Galusha has served as Chairperson for the United Way of the Midlands Teen Life Skill Development Committee and is currently engaged in an effort to promote "Crisis Assistance Teams" in each Junior and Senior High School across the state. For more information, contact Dr. Galusha at his office: Omaha Public Schools, 3819 Jones, Omaha, 68105; (402) 978-7390.

With both the Leadership Confluence and the Regional Conference occurring in the same month, I've been motivated to an even stronger commitment to our organization. The Auxiliary does have the potential to make a difference in the world in which we live, and as Mrs. Szewczyk has noted over and over, "The key to our success is TEAMWORK." Together, we can face the challenges in our state.

Colleen Adam (Mrs. George)
President, NMAA

CONFLUENCE I

From October 18-20 over 300 presidents and presidents-elect from state and county medical auxiliaries of all sizes and from all over the country met in Chicago for an AMAA leadership confluence. What an experience!

We discovered many things we always wanted to know but didn't know who to ask regarding the national auxiliary, how to communicate, how to program quality meetings, deal with auxiliary finances, develop a relationship with spouses of residents and students for future involvement. Other meetings involved positive approaches to membership, parliamentary procedures, how to listen and speak effectively. Presentations by AMPAC and a legislative update by AMA representatives were also valuable.

Of significant help were sessions on motivation and leadership and a presentation called "So Now You're Going to Be An Auxiliary President". Tools for recruiting, properly orienting, motivating and **keeping** the right people for the right jobs were stressed.

Programs for special health interests were well-attended and unfortunately scheduled (out of necessity) so you had to make choices. Topics covered included AIDS Education, Adolescent Health, Community Action Against Smoking and Family Stress During Malpractice Litigation. I was able to attend the latter two. This year the AMAA will contribute to public awareness and enactment of legislation where indicated to stop smoking in all hospitals and physicians offices and to emphasize particularly the hazards of smoking by pregnant

women and the dangerous effects of passive smoking on the young. Also planned are programs to be presented by physicians to elementary school children at about the seventh grade level on the hazards of smoking. A discussion of how to deal with family stress during malpractice litigation was presented by Dr. Erwin Janssen from the Menninger Foundation. We must begin by acknowledging the reality of malpractice and then proceed to develop local support programs to help during stress. (A videotape of this session will be available to members in January, 1988).

In a plenary session called "Animals in Research" prepared by the AMA, we were asked for our assistance in helping to inform the public of the significance of continuing to use animals in research in order to facilitate progress in clinical medicine. Particular areas of concern are the Pound laws that curtail the use of animals in pounds (unwanted and about to be destroyed) for this purpose. Animal welfare groups are becoming increasingly militant and have huge financial resources at their disposal. Well-organized action to deal with this problem is imperative.

We finished our sessions full of enthusiasm that we will try hard to sustain as we make our contributions as current or future Auxiliary leaders. It helps to know we have a national office with dedicated people to assist us whenever we need it.

Donna Stone, President-Elect
Lancaster County Medical Auxiliary

Welcome New Members

Rodney J. Taylor, M.D.
UNMC - 42nd & Dewey Ave.
Omaha, NE 68105

Joseph W. Sloan, Jr., M.D.
1101 No. 10th, Ste. B
Beatrice, NE 68310

Washington C. Hill, M.D.
601 No. 30th, #4810
Omaha, NE 68131

Kent E. Erickson, M.D.
1202 Central Ave.
Auburn, NE 68305

Allan D. Wilsey, M.D.
204 N. Randolph
Weeping Water, NE 68463

Mark V. Carlson, M.D.
284 - 9th St.
David City, NE 68632

Eddie J. Pierce, M.D.
2307 Box Butte Ave.
Alliance, NE 69301

Jeffrey D. Akerson, M.D.
1116 - 10th Ave.
Sidney, NE 69162

Ronald L. Ernst, M.D.
3005 - 19th St.
Columbus, NE 68601

Randy T. Kohl, M.D.
632 W. Fairview
Albion, NE 68620

Michael G. Skoch, M.D.
1021 W. 14th
Hastings, NE 68901

Nila Moore Novotny, M.D.
3005 - 19th
Columbus, NE 68601

Rodney L. Johnson, M.D.
Dept. Radiology
Good Samaritan Hospital
Kearney, NE 68847

Steven Sukstork, M.D.
715 N. St. Joseph
Hastings, NE 68901

A. David Felber, M.D.
214 Pearl St.
Wayne, NE 68787

Daniel J. Rosenquist, M.D.
3005 - 19th St.
Columbus, NE 68601

In Memoriam

*By medicine life may be prolong'd
yet death*

Will seize the doctor too.

—Shakespeare

John T. Waggener, M.D. — (Born September 27, 1883 - died July 9, 1987) — Medical Specialty — General Practice. Doctor Waggener was a graduate of Creighton University School of Medicine in 1911, and practiced in Adams. He was a member of the Nebraska Medical Association and the American Medical Association. Survivors include: son, Dr. Donald T. Waggener, Lincoln; daughter, Mrs. Robert B. (June) Elliott of Omaha; two grandsons, and six great grandchildren.

Leo H. Hoevet, M.D. — (Born May 21, 1906 — died July 22, 1987) — Medical Specialty — General Practice. Doctor Hoevet was a graduate of the University of Nebraska College of Medicine in 1934 and practiced in Chadron. He was a member of the Nebraska Medical Association and the American Medical Association. Doctor Hoevet is

survived by his wife, Eunice; sons, Dr. William of Worthington, MN, Dr. Michael, Portland, OR; and daughter, Patricia Shepard, Houston, TX.

Edmond M. Walsh, M.D. — (Born March 13, 1904 - died September 27, 1987) — Medical Specialty — Internal Medicine. Doctor Walsh was a graduate of Creighton University School of Medicine in 1930 and practiced in Omaha. He was a member of the Nebraska Medical Association and the American Medical Association. Doctor Walsh is survived by his wife, Barbara; daughters, Mary Kay Peek of Bellevue, Michaela Reed of San Francisco, CA, Bonnie Clark of Arlington, VA, Patricia Weaver and Barbara Ketzler of Omaha; sons, John Naughtin of Lawrence, KA and Anthony Naughtin of Edmonds, WA.

Coming Meetings

NMA ANNUAL SESSION — April 29-May 2, 1988, Omaha Marriott.

NMA FALL SESSION — September 22-24, 1988, Cornhusker Hotel.

UPCOMING CME COURSES

34TH SCIENTIFIC SESSION - NEBRASKA OB/GYN SOCIETY — December 3-6, 1987, Bally's, Las Vegas, Nevada

8TH ANNUAL MEDICAL SKI CONFERENCE — February 21-25, 1988, Keystone Colorado

8TH ANNUAL ENT SKI CONFERENCE — March 5-11, 1988, Keystone Lodge, Colorado

DRUG THERPY CIRCUIT COURSE — March 16, 1988, Holiday Inn, Hastings, Nebraska

FAMILY PRACTICE REVIEW — April 18-29, 1988, Omaha, Nebraska

FAMILY PRACTICE REVIEW — May 9-20, 1988, Omaha, Nebraska

INTERNATIONAL SYMPOSIUM ON INFLAMMATORY HEART DISEASE — July 27-31, 1988, Snowmass, Colorado

CARDIOVASCULAR DISEASE PREVENTION IN THE YOUNG AND ADULT — July 31-August 3, 1988, Snowmass, Colorado

EMERGENCY MEDICINE REVIEW—September 19-24, 1988, Omaha, Nebraska

EMERGENCY MEDICINE REVIEW — October 3-8, 1988, Omaha, Nebraska

To register and for further information contact: Marge Adey or Brenda Ram, Center for Continuing Education, University of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, Nebraska 68105. Telephone (402) 559-4152.

CREIGHTON UNIVERSITY

RECENT DEVELOPMENTS IN INFECTIOUS DISEASES — Nov. 25-Dec. 15, Grand Cayman Island. 18 credit hours.

CURRENT CONCEPTS IN CARDIOLOGY — Dec. 4, Room 6712 Health Professions Center, Saint Joseph Hospital, Omaha, NE. Fee: NC. Hours: 6. The program is designed to present recent advances in diagnostic methods and therapeutic approaches in cardiology.

UNDERSTANDING AIDS — Dec. 11-12, Red Lion Inn, Omaha, NE. 13 credit hours. Designed to present updated information for professionals caring for men, women and children who may have HIV infection. Fee: \$100.

RECENT DEVELOPMENTS IN INFECTIOUS DISEASES — Jan. 1-Mar. 26, 1988, Kona Coast, HI. 24 credit hours.

ESOPHAGEAL DISORDERS — Feb. 17-24, 1988, Great Bay Beach Hotel, St. Maarten. 24 credit hours. Designed to give a didactic course to a small group of select surgeons who are interested in studying detail surgical diseases of the esophagus. Fee: \$500.00.

THE FLORIDA TUTORIAL — Apr. 7-8, 1988, Orlando Airport Marriott, Orlando, FL. Fee: TBA. Hours: TBA. This annual program is a commitment to resident education and brings together leading specialists in OB/GYN to present current advances in the field.

SYMPOSIUM ON INFECTIOUS DISEASES — Apr. 15, 1988, Boys Town National Institute Auditorium, Saint Joseph Hospital, Omaha, NE. Advances in infectious disease. Fee: TBA. Hours: 6.

FAMILY MEDICINE UPDATE — May 27-29, 1988, The Lodge at Okoboji, IA. Fee: TBA. Hours: TBA.

PERINATAL INFECTIONS — June 3-4, 1988, Marriott Hotel, Omaha, NE. Fee: TBA. Hours: TBA. This regional meeting

will bring together national experts to discuss various topics in perinatal infection.

SIXTH ANNUAL MAURICE E. GRIER SYMPOSIUM (OB/GYN) — June 11, 1988, Marriott Hotel, Omaha, NE. This program centers around presentations by outgoing residents in the field of OB/GYN. Hours: TBA. Fee: TBA.

VISITING PROFESSOR SCHEDULE

DR. JOHN CAMERON — Was scheduled for September, 1987, postponed until March, 1988. Dr. Cameron is Surgeon-in-Chief, The John Hopkins University, Department of Surgery, Baltimore, Maryland.

For further information or to register, contact: Creighton University School of Medicine Division of CME, Omaha, NE 68178, 402-280-2550 or outside Nebraska toll free 800-228-7212, Ext. 2550. The Creighton University School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.

NATIONAL JEWISH CENTER FOR IMMUNOLOGY AND RESPIRATORY MEDICINE

NATIONAL JEWISH CENTER FOR IMMUNOLOGY AND RESPIRATORY MEDICINE KEYSTONE SUMMIT — February 3-7th, 1988 at Keystone Colorado. A tribute to: Richard Farr, M.D. Topics: Allergy, Asthma, Pharmacology, Advances in Immunology, Diagnostic Testing and more. Registration fee: \$325.00 — \$165.00 for Allied Health and Physicians in Training. 16.5 hours of AMA Category 1 Credit. For brochure and more information contact: Jeri Wagner, National Jewish Center for Immunology and Respiratory Medicine, 1400 Jackson Street, Denver, CO 80206, 303-398-1000.

REPORTS OF OFFICERS, DELEGATES AND COMMITTEES

FALL SESSION

September 10, 11 & 12, 1987

(These reports appear as originally submitted. For the House of Delegates deliberations, possible changes, and final action, refer to the minutes which follow these reports.)

L. Dwight Cherry, M.D., Lincoln - Chairman; C. A. McWhorter, M.D., Omaha; Hiram Walker, M.D., Kearney; Robert F. Shapiro, M.D., Lincoln, Donald J. Pavelka, M.D., Omaha; Richard Raymond, M.D., O'Neill; Paul E. Collicott, M.D., Lincoln; Richard Meissner, M.D., Omaha; Harry McFadden, M.D., Omaha; C. T. Frenichs, M.D., Beatrice.

The Board of Directors has met on several occasions since the 1987 Annual Session and presents the following report to the House of Delegates.

1. The House of Delegates recommended that the Board appoint an overview committee to review the PRO from the aspects of its operation, its policies, its contractual relationships and its fiscal performance. An NMA PRO Overview Committee was appointed and has met on several occasions subsequent to the 1987 Annual Session. The Committee's report appears in this handbook.

2. The Board considered the request submitted during the 1987 Annual Session deliberations that a mechanism be established for accumulation of data which would indicate the amount of uncompensated care that is provided by physicians. Background information was secured from several sources which indicated that information for Nebraska is limited at best and there is a sizable difference in this concept when one considers a study of uncompensated care as compared to uncompensated care. Information obtained from the American Medical Association included Report B (A-84) as developed by the Council on Medical Service. This report entitled "Uncompensated Medical Care", was the result of a resolution submitted at the AMA's previous annual meeting. The report noted that the Council on Medical Service would continue to study the subject, with particular emphasis on problems of financing medical care for those whose economic status is such that they may not be eligible for coverage under tax-supported programs, yet may also find it difficult to purchase adequate health insurance coverage in the private sector. This report compiled information by specialty, by region, by the physician's age, and by size of practice. The Board felt that the information was of value, however, inasmuch as the data was compiled for the calendar year 1982, the Board recommends that the Nebraska Medical Association Delegates to the AMA House of Delegates be requested to prepare a resolution which would ask the AMA to update this report. The Board feels that the resulting information would be of value to state associations by presenting valid, comparative data.

3. The House of Delegates at the 1987 Annual Session referred Resolution #8 to the Board of Directors which addressed the three-tiered rate being paid across the state for Medicare services. The resolution called on the Board to study the matter and refer it to the appropriate committee or commission. A copy of the resolution was submitted to Congresswoman Virginia Smith due to her work on the Rural Health Care Coalition. The Board referred the resolution to the NMA Ad-Hoc Committee on Blue Cross/Blue Shield of Iowa - Medicare for its consideration.

4. The House (A-87) referred Resolution #11 to the Board which addressed the Medicare patient notification requirements scheduled to take effect October 1, 1987. This subject was considered by the Board and also referred to the Ad-Hoc Committee on Blue Cross/Blue Shield of Iowa - Medicare for inclusion in its discussions with representatives of the Iowa insurance company. The August 14, 1987, issue of NEBRASKA MEDICAL ASSOCIATION NEWS carries an item on this subject as follows: "Association members are reminded that as of October 1, 1987, the Omnibus Reconciliation Act of 1986 contains a provision that requires a nonparticipating physician who performs an elective surgical procedure, valued over \$500, on an unassigned basis for a Medicare beneficiary to provide the beneficiary in writing the estimated approved charge under Medicare, the excess of the physician's actual charge over the approved amount and the co-insurance applicable to the procedure. This information is to be provided the patient on a form to be developed by the Secretary of the Department of Health and Human Services." The Board is not aware that the mechanism under which this requirement will operate has been completed. The criteria to be utilized by the intermediaries has not been made known nor is the Board aware that the appropriate form has been developed or provided by the Department of HHS. Members will be informed as further information becomes available.

5. The efforts of the Ad-Hoc Committee on Blue Cross/Blue Shield of Iowa - Medicare have been substantial since the Annual Session of the House of Delegates. Several meetings have been held with representatives of Iowa Blue Shield and as a culmination of those efforts, several activities are being considered or are underway. The most evident activity will be the presence of representatives of the company during the Fall Session. As directed by the House at the Annual Session, the NMA Delegates and Association members in general have been notified that the insurance company representatives will be present and that specific questions and problems can be brought for consideration during this meeting. In addition, the Ad-Hoc Committee Re: Blue Shield of Iowa - Medicare is in the process of developing a workshop scheduled to take place during the 1988 Annual Session. The Board commends the Committee for their excellent efforts regarding this very important activity.

6. The Board considered Resolution #23 as referred by the House of Delegates at the Annual Session which directed the Association develop further expertise and resource people to provide support and guidelines for physicians in their dealings with Medicare. The Board felt that the responsibility for addressing this issue rested in part with the Ad-Hoc Committee on Blue Cross/Blue Shield of Iowa - Medicare. The Committee is in the process of developing various mechanisms whereby the Association member and his/her staff can become better informed of the mechanisms and processes under which the Medicare program functions. The issue as proposed in Resolution #23 is being addressed in large part by the efforts of the Ad-Hoc Committee.

7. The Association's By-Laws provide that the Board of Directors shall be responsible for filling vacancies occurring in any office subject to the approval of the House of Delegates at its next regular, scheduled session. With the receipt of Doctor Alvin A. Armstrong's resignation as Speaker of the House, the By-Laws specify that the Vice Speaker automatically assumes the speaker position. It was the Board's decision to ask Doctor Harry W. McFadden to serve as Vice Speaker Pro Tem for the 1987 Fall Session and the 1988 Annual Session with an election taking place during the Annual Session to select a

Vice Speaker. The Board presents this decision to the House for its ratification.

8. The Board, with the input of its Ad-Hoc Committee on Non-Dues Income, has been active in primarily two areas, that being the NMA-sponsored Visa card and consideration of endorsement of the AMA/Medical Payment System. Arrangements were completed with FirstTier Bank and the credit card was offered to NMA members in an August mailing. The Board considered this an activity of measurable potential value to the Association in that income will be generated through the use of the card by the member with no additional charge to the member. The Association gains the sponsoring fee, ½% of all charges on the card, as is the case with the sponsor of any such card.

The Board has discussed the endorsement of the AMA sponsored Medical Payment System on several occasions. The Metro Omaha Medical Society and the Lancaster County Medical Society have indicated their desire to proceed with finalization of the agreements with the Medical Payment System and implementation of the program. The Board of Directors has decided to move forward on the MPS project.

9. The Board reviewed the fact that promotional material is being distributed to Nebraska physicians which proposes dispensing of medications by physicians. The information is being distributed primarily by repackaging/wholesale firms. There are certain requirements, dictated by state law, that must be met by physicians who wish to dispense prescription drugs. In an effort to keep physicians abreast of these requirements, an article was included in the August 14, issue of the NEBRASKA MEDICAL ASSOCIATION NEWS which presented information provided by the State Department of Health regarding this subject.

10. The AMA House of Delegates spent a considerable amount of time on the subject of AIDS during the June annual meeting. One of the primary areas of emphasis was that physicians should keep up to date on the current information available on this subject. The Board directed that NMA members be encouraged to maintain an awareness of the current information being made available on the subject of AIDS. Following contact with the AMA, an article was carried in the August 14, issue of the NEBRASKA MEDICAL ASSOCIATION NEWS calling attention to the series of monographs on the subject of AIDS that appeared in recent issues of the AMERICAN MEDICAL NEWS. It is anticipated that the AMA will continue to produce information and Association members are encouraged to maintain an awareness of current data on this subject.

11. The Board has reviewed the report of the Scientific Sessions Committee as well as registration and attendance figures for the 1987 Annual Session. The 1987 Session was scheduled under a revised format. It is the Board's opinion that the changes as proposed by the Scientific Sessions Committee should be approved and implemented in the format of the 1988 Annual Session.

12. The Board considered the issue regarding associate membership as presented by the Board of Councilors when meeting during the last Annual Session. The Board of Councilors had recommended that the recommendations for associate membership should be made by the physician's local county society as is the case with life membership recommendations. The Board recommends that this change be made to provide for a continuity of membership classification as is evident in all other membership decisions. The Board has also recommended

that formal provision be made in the By-Laws for the figuring of the number of years that a physician must have been in practice in order to qualify for either membership category. The practice over the years has been to count the number of years following graduation from medical school as the criteria for approval. It is the Board's opinion that this fact should be defined in the By-Laws. The Board further recommends that associate members be charged a membership fee to differentiate between this category of member and the life member. The Board's recommendation is that an associate member be charged a dues amount equal to 10% of the active status dues level each year. In addition, the associate members would be charged for Association mailings if they wish to receive them. The Board of Directors presents these actions to the House of Delegates for approval.

13. The Board considered Resolution #33 (A-87) which asked that it explore the feasibility of purchasing or building a facility to house the Association and in so doing eliminate the need for office space rental expense. Based on the amount of space currently utilized by the Association with some minor leeway for expansion, it was determined that the cost of financing such a purchase would be considerably greater than current lease costs. It was the Board's opinion that given the cost and other advantages of the present location, the current lease situation is suitable for the Association at this time, and that the proposal in the original resolution is not economically feasible.

14. The Board reviewed and considered the present membership situation which recognizes that 71% of the active physicians in Nebraska were dues paying members of the NMA at the close of 1986. It was noted that at the present time, the comparable figure is 68.5%, however, it is anticipated this percentage figure may well increase prior to the end of 1987. It was further noted that at the current time, 72.5% of all physicians in Nebraska are NMA members; including 64.1% of Omaha physicians, 85.9% of Lincoln physicians, and 77.7% of Greater Nebraska physicians. The Board feels that the membership recruitment activities of the Association are successful, however, it is evident that the Association must be continually aware of the need to increase the number of members of medicine's organizational structure in the State of Nebraska.

The Board submits this report to the House for its consideration and stands ready to consider matters which may be referred during this Fall Session.

REPORT OF THE DELEGATE TO THE A.M.A.

The Annual Meeting of the American Medical Association was held in Chicago, Illinois from June 21st to June 25, 1987. Four hundred six delegates were in attendance. The following are the major issues that were considered at the meeting:

ADDRESS OF THE PRESIDENT

The AMA President, John J. Coury, Jr., M.D., issued five challenges to the medical profession aimed at improving the welfare of patients and physicians in this country. These include challenges to be active as community leaders; to relegate to patients with understanding and openness; to be strong advocates of medicine; to be uncompromising in the practice of cost-effective, quality medicine; and finally, to seek unity in the profession.

AIDS

As might have been expected, AIDS controlled a large number of the discussions that ensued at the Annual Meeting. The prevention and control of AIDS easily dominated the discussion at this meeting.

The AMA issued a widely publicized report addressing the AMA's overriding concern that there be judicious balance between the well-being of HIV-Positive patients and the protection of the public health. The recommendations were detailed in the AMA Board of Trustees Report "YY" and were based upon the best scientific information and data currently available. There were seventeen specific recommendations, and a number of resolutions on this issue. The major thrust of this report is that education must continue to be the major weapon in halting the spread of HIV infections. The report further stressed that individuals in society must resume responsibility for being well informed and for actions that affect their own health and the health of others.

The House approved several revisions in the report. It calls for:

- 1) Mandatory testing for the AIDS virus for donors of blood and blood fractions, organs and other tissues intended for transplantation in the U.S. or abroad, for donors of semen or ova collected for artificial insemination or in vitro fertilization, for immigrants to the U.S., and for military personnel.
- 2) Voluntary testing should regularly be provided for patients who are from areas with a high incidence of AIDS or who are engaged in high-risk behaviour requiring surgical or other invasive procedures. If the voluntary policy is not sufficiently accepted, the hospital and medical staff shall be prudent to consider a mandatory program for the institution.

FOREIGN MEDICAL GRADUATE SECTION

After considerable discussion, the House did not approve the establishment of a new section for foreign medical graduates which was recommended by the Board of Trustees. This was indeed an emotional and difficult issue, but the House of Delegates felt that establishment of a separate section for foreign medical graduates might increase, rather than decrease the conflicts likely to arise from diversion points of view and special interests represented by such a heterogeneous group.

AMA FINANCES

There will be no dues increase in 1988, but will be likely required in 1989. Operating revenues increased 11.4% over 1985 and operating expenses increased 9.4% over 1985.

DISPENSING BY PHYSICIANS

After considerable discussion, the House voted to adopt the following policy statement:

"RESOLVED, that the American Medical Association support the physicians right to dispense drugs and devices when it is in the best interest of the patient and consistent with AMA's ethical guidelines."

HEALTH POLICY AGENDA FOR THE AMERICAN PEOPLE

After five years of effort to re-examine the basic values upon which the health care system is based, the House of Delegates considered 195 recommendations of the Health Policy Agenda for the American people.

The House adopted a great bulk of the HPA recommendations as policy. It modified others based upon the Board's advice and the testimony presented at the hearing of the special Reference Committee. Some HPA recom-

mendations were rejected. The final version containing the AMA actions will soon be available.

PRO'S

It was obvious that physicians across the country are continuing to have difficulty with the PRO's and their impact upon the practice of medicine. A large number of resolutions were considered by the House during this session concerning PRO's.

Nebraska Resolution #115 referred to due process in the PRO. The Nebraska resolution called upon the AMA to strongly urge that a meaningful system of due process which recognizes the rights and needs of both physicians and patients in the PRO process be developed. The Reference Committee substituted a resolution in lieu of #115, along with three other resolutions of similar wording and Report "M" of the Council on Medical Service. The Reference Committee's substituted resolution, however, was amended with the final result being as follows:

"RESOLVED, that the American Medical Association seek amendments to the Peer Review Organization Law (PL 97248) which would require that:

- 1) the definition of "gross and flagrant" be reviewed and modified to include only those violations which cause the PRO to conclude that the continuation of medical practice by the physician would constitute an immediate danger to the health, safety or well-being of Medicare beneficiaries; and,
- 2) if an eminent hazard to the health and welfare of Medicare beneficiaries exists, a special expedited hearing process should be statutorily created for immediate action prior to, if possible, or immediately after a sanctioned decision."

Nebraska Resolution #117 calls upon the AMA to seek repeal of the current PRO program. This was considered along with Report "W" of the Board of Trustees referring to PRO legislative repeal. Both the Nebraska resolution and Report "W" were referred to the Board of Trustees with a report back to the House of Delegates in interim session, 1987.

Nebraska Resolution #116 referring to generic screens under PRO was amended by elimination of the second resolved. As you will recall, the resolution was as follows:

"RESOLVED, that the AMA seek extensive modification of the Health Care Financing Administration generic screens; and,

Be it further resolved, that the AMA urge discontinuation of the utilization of generic screens."

Other actions by the House pertaining to PRO's included:

- 1) Called upon the AMA to seek an amendment to the Medicare Law to eliminate the notice of Medicare denial of payment decision based on adverse quality of care findings until after all review and appellate avenues are exhausted.
- 2) Asked the AMA to continue to monitor the activities of PRO's and encourage physicians to report their concerns with the PRO program to the AMA and their State Medical Associations.
- 3) Recommended that in cases involving a PRO denial, a physician of the same specialty will review the case prior to the formal denial letter being sent. Prior to the initiation of sanctioned action or corrective action plan, either a subspecialist peer

or a specialist who has appropriate expertise and experience in the field will review the case.

- 4) Other actions relating to the PRO involved a review by an impartial panel of physicians, opportunity be accorded to the reviewed physician to hear and see all of the evidence presented to a panel, and last, the Board of Trustees to study where the AMA should seek repeal of the PRO Law.

PHYSICIAN DRG'S

The House reiterated the AMA's strong opposition to include any physicians under the DRG program.

OMNIBUS BUDGET RECONCILIATION ACT OF 1986

The House considered several resolutions that addressed problems physicians are experiencing with OBRA and called on the AMA to:

- 1) Advise its members that the decision of whether or not to be a participating physician of Medicare is a personal choice.
- 2) Use all appropriate means to rescind those recently enacted regulations and statutes which unfairly discriminate against health care providers and jeopardize the quality, availability and affordability of health care for the aged and the infirmed.
- 3) Request Congress to return to the original intent of the Medicare Law as expressed in Sections 1801 and 1802 of Title XVIII enacted in 1965.
- 4) Specifically request Congress to rescind the incentive in the Omnibus Budget Reconciliation Act of 1986 regarding hospital referral of Medicare patients to participating physicians.
- 5) Work to amend the Medicare Law to eliminate any financial incentives to Medicare carriers for signing up large numbers of physician providers.
- 6) Specifically seek to rescind before its effective date of October 1, 1987 the OBRA Act of 1986 provision that requires a non-participating physician who performs an elective surgical procedure on an unassigned basis for a Medicare beneficiary to provide the beneficiary in writing the estimated approval charge under Medicare, the excess of the physician's actual charge over the approved amount and the co-insurance applicable to the procedure.

NEBRASKA RESOLUTION #114

This resolution referred to HICFA's physician fees reductions. The Reference Committee recommended and the House of Delegates adopted a substitute Resolution #114 as follows:

"RESOLVED, that the American Medical Association review the recent Legislative revisions that empower the Secretary of Health and Human Services to apply 'inherent reasonableness' criteria to physician payments and fees under Medicare, attempting to secure Legislative changes as warranted; and,

Be it further RESOLVED, that the American Medical Association oppose any arbitrary or inappropriate use of 'inherent reasonableness' criteria for determining Medicare reimbursement levels."

Resolution #114 from Nebraska called on the AMA to oppose Medicare selection of certain procedures for fee reduction.

MAAC REGULATIONS

The House considered a report from the Council on Medical Service and several resolutions dealing with problems associated with the MAAC charges and the discrepancies therein. The House adopted a policy calling on the AMA to:

- 2) Continue to seek judicial, Legislative and regulatory changes that will eliminate the Medicare Maximum Allowable Actual Charge (MAAC) regulations for participating physicians.
- 2) Seek to assure, in the meantime, that all Medicare fiscal intermediaries send to non-participating physicians adequate information for calculating MAAC levels.
- 3) Support any individual component societies legal efforts to prevent passage or overturn any state law that restricts the right of physicians to contract for service rendered to their patients under certain conditions.

Your AMA Delegates, Doctors Coe, Cornelius, Gogela and Roffman and Alternates, Doctors Shapiro, Cherry and McWhorter, were very proud to represent the NMA at Chicago. They will welcome any questions and input regarding the items that were discussed.

Respectfully submitted,
Blaine Y. Roffman, M.D.
Delegate to the AMA

REPORT OF THE CREIGHTON UNIVERSITY SCHOOL OF MEDICINE

Creighton University wishes to thank the Nebraska Medical Association for the opportunity it affords us to report periodically on our progress and on matters we believe to be of interest to the Medical Association and its members.

Intimately related to our mission of educating medical students, residents and other health professionals are our responsibilities for providing service to the public and the profession. This service takes the form of research intended to advance the effectiveness of medical practice, the testing and introduction of new knowledge and technologies, and the provision of consultative services to the practicing community. In the recent past, and with the assistance of the Health Future Foundation, we have been able to initiate several new programs to assist in meeting these responsibilities as well as to enhance some programs that have existed at Creighton for some time.

Our Perinatology Program under the direction of Dr. Washington Hill has strikingly expanded its consultative services and its educational activities during the past year and a half. The Nebraska Perinatal Letter is widely read and highly regarded by the practice community. A large number of public and professional education programs have been presented in many places in Nebraska and western Iowa. It is our intent to expand the ability of this program to meet the demands placed upon it by the recruitment of another perinatologist in the very near future.

The Left Ventricular Assist Device testing program has now been fully approved by the Federal Drug Administration. The laboratory necessary for animal studies has been completed and animal studies have begun. We anticipate the beginning of clinical studies in the near future.

The Creighton Diabetes Center established in 1986 has also undergone significant growth in the service and educational programs it provides. It also conducts many public and professional educational programs and a busy consultative service for the management of difficult to control diabetes. The Center has obtained approximately a half million dollars in research grant support and is publishing vigorously.

Another of our productive endocrinology efforts, our Hard Tissue Center, has also expanded its research and consultative services activities. It receives in excess of \$1.7 million annually in support of its research activities including a SCOR (Specialized Center of Osteoporosis Research) grant from the National Institutes of Health. The purpose of this grant is to establish the etiology, prevention, and treatment of osteoporosis.

Our gerontology program is also in a phase of rapid expansion under its director, Dr. David Haber who was appointed January 1, 1987. This Center focuses on the education of health care professionals in the care of geriatric population and on public education and services addressing primarily the maintenance of health and functional integrity of older people. The U.S. Department of Health and Human Services has awarded to the Gerontology Center a grant in excess of \$700,000 to establish a Regional Geriatric Education Center the primary purpose of which is the education of health professionals in the needs of geriatric patients.

Dr. Bruce Boman assumed the position of Director of the Creighton Cancer Center September 1, 1987. Dr. Boman, who holds both an M.D. and a Ph.D., is a certified medical oncologist who comes to Creighton from the M. D. Anderson Tumor Hospital and Institute. He will be responsible for expanding our cancer research activities for integrating cancer patient care at our Medical Center, and for leading the development and enhancement of our cancer program. The Cancer Center's efforts are intended to contribute not only to our educational programs, but to our services to the profession. Dr. Boman has special knowledge and expertise in colon cancer, including its etiology, pathogenesis, and early detection and treatment.

During the past year faculty members at the Creighton University School of Medicine have also introduced transtracheal oxygen therapy into our region in a carefully controlled trial to assess quantitatively its effects on the quality of life and functional status of patients with chronic lung disease. Our Division of Cardiology has also introduced balloon valvuloplasty in our region.

These many program developments we hope are evidence of a vigorous faculty of medicine that has served our state and region for nearly 100 years in addition to providing educational opportunities to people from all over the United States.

Respectfully submitted,
Richard L. O'Brien, M.D.
Dean

REPORT OF THE UNIVERSITY OF NEBRASKA COLLEGE OF MEDICINE

Over the past few months, we have participated in a great deal of activity regarding cooperative programs with other nearby medical facilities. These include Creighton University School of Medicine, Nebraska Childrens Hospital and Bishop Clarkson Hospital, among others. Although integrated programs with Creighton University, through the Creighton-Nebraska Universities Health Foundation, have been in effect for several years, in the

past year these activities have increased in tempo and magnitude. Combined units and teaching and training programs in Neurology, Orthopedic Surgery and Dermatology have been in existence. These efforts have reached a new order of magnitude with the combining of the Departments of Psychiatry at the two medical schools, with Dr. Frank Menolascino as Chairman. Over the next few years the educational programs for medical students and residents, the research activities, and most of the clinical activities, will be completely integrated.

Serious negotiations are underway between Drs. Cassidy and Frias, the Chairman of Pediatrics at Creighton University and University of Nebraska respectively, regarding the potential for cooperative and integrated efforts in pediatrics. This interaction also involves to a very great extent Nebraska Childrens Hospital, a third potential partner in the integration of pediatric education. Areas of pediatrics in which there have been agreements for cooperation, or in which agreements are being discussed, include genetics, gastroenterology, cardiology, cardiac surgery, neonatology and infectious diseases.

Discussion with Bishop Clarkson Hospital are in a very early stage. Consultants are studying the possibility and advisability in a wide variety of areas, including the potential for sharing certain hospital services, shared space, to even some type of medical staff integration.

Why are we undertaking these cooperative ventures? This is being done to improve the quality of our teaching programs, as well as to possibly improve research and patient care. There are teaching strengths at all of the various institutions, and it is certainly desirable to make use of complementary teaching skills for all of the students and residents in our various institutions. These efforts may enhance the possibility of collaboration which should improve research productivity. It is also hoped that, in an era of very limited resources, that these efforts can save money. This could be accomplished by avoiding the necessity for new buildings at our various institutions, as well as avoiding the necessity for faculty and staff recruitment, in instances where personnel at another institution can be utilized.

In addition to these above activities, I should briefly mention some new additions in important administrative positions in the College of Medicine. Dr. McClure Smith has accepted an offer to succeed Dr. Joseph Scott as Chairman of the Department of Obstetrics and Gynecology. Dr. Smith was recruited from Oklahoma City, but is well known to many Nebraska physicians, since he was on our faculty from 1975 to 1979.

Dr. Dennis Landers has been named Interim Chairman of the Department of Anesthesiology. Dr. Landers received his Ph.D. and M.D. from the University of Nebraska Medical Center in 1969.

Dr. Stanley Shane has been recruited from West Virginia University School of Medicine as Associate Dean and Medical Director for Managed Health Care Systems and Ambulatory Care. Dr. Shane is a graduate of the University of Kansas School of Medicine and is an internist with the subspecialty of endocrinology and metabolism.

Respectfully submitted,
Robert H. Waldman, M.D.
Dean

REPORT OF THE STATE DEPARTMENT OF HEALTH

I welcome this opportunity to bring you up to date on

the programs and activities of the Department of Health. In this report I will mention a few items of interest from each of our bureaus.

BUREAU OF EXAMINING BOARDS: The Bureau continues its efforts to deal with the problem of chemically impaired professionals. A bill was introduced on behalf of the Department during the last legislative session. This bill would allow the Department to enter into agreements with licensees who self report problems with drug or alcohol abuse, without the Department's having to file a petition for disciplinary action. Such legislation may encourage early reporting, thereby promoting early treatment and recovery. A task force will consist of persons from various boards of examiners and organizations who have shown interest in such legislation. The goal of the interim study to be conducted by the task force is to modify the proposed legislation as needed and to garner support for getting legislation passed during the upcoming session.

Regulations governing the certification of social workers was the topic of discussion at a public hearing August 25, at the State Department of Health. The regulations are the result of a bill the Legislature approved last year which requires that practitioners who want to present themselves to the public as social workers must be certified by the Department of Health after October 1, 1987. The proposed regulations require that an applicant must have an undergraduate or masters degree in social work in order to be certified as a social worker after October 1, of this year. For certification as a master social worker, an applicant must have a masters or doctorate degree in social work as well as 3000 hours of experience and must pass an examination administered by the Department of Health.

LB 407 CREDENTIALING PROGRAM: The credentialing program (LB 407) is now in its third year. Currently, reviews are being conducted on applications from the Massage Therapists, Marriage and Family Counselors and Home Health Aides. This effort involves reviews by technical committees and the Board of Health which then submit their reports to the Director of Health. The Legislature then receives the results of this effort along with the Director's recommendations. Subsequent to last year's reviews, the Legislature this spring approved LB 190 which regulates the radiologic technicians in conjunction with existing statutes but denied licensure to the neuromuscular physicians, medical technologists, dietitians, and nutritionists.

INTERAGENCY EFFORTS: Recently the Department began participating in several interagency projects directed toward common problems. As a result of new legislation (LB 637) the human service agencies in Nebraska will be directing their efforts toward coordinated delivery of family centered services in the home and community. The intent is to keep children in the family and to separate children from the home as a last resort and then try to keep them in the community. Funds are being sought from the private sector to implement plans developed during the first phase of the project.

In another interagency effort, plans are to establish Critical Incident Debriefing Teams, manned by volunteers, to deal with acute reactions to traumatic events ranging from an accidental death of a child to a major disaster. The Department, through the Emergency Medical Services Division, will lead this effort which includes representation from the Fire Marshal's office, the Department of Institutions, and the State Patrol. A pilot project is being planned for western Nebraska.

Another statewide program for this fall which involves

several divisions in the Department should result in 20 workshops being held for health workers. Emphasis will be placed on AIDS and other communicable diseases and informing these workers on how to reduce their risks when providing emergency aid.

The workshops are aimed primarily at emergency medical technicians, firefighters, police officers, sheriffs' deputies and other "first responders", those first at the scene of an accident.

Virginia Wilkinson, a nurse epidemiologist with experience as an educator in disease control, will conduct the workshops. Participants will learn more about Acquired Immune Deficiency Syndrome as a disease, how it and other infectious diseases are transmitted, and what precautions emergency workers can take when dealing with blood and body fluids to reduce the risk of contracting infection.

METABOLIC SCREENING: In July of this year a notice was sent to all physicians, hospitals, and laboratories in the state advising of changes in the metabolic screening program for newborns. With the passage of LB 385 into law, biotinidase deficiency screening has been added to regimen of metabolic screening disease tests that must be done for all infants born in Nebraska. After August 30, 1987, all newborns must be screened for three metabolic diseases: phenylketonuria, primary hypothyroidism, and biotinidase deficiency. This legislation also requires that the Department establish rules and regulations which will prescribe the screening and reporting processes and define the role of physicians, laboratories, hospitals, parents, and the department. LB 385 also requires the Department to establish a central data registry which documents that every child born in Nebraska is tested for these metabolic diseases.

BUREAU OF VITAL STATISTICS: The Department is planning to implement changes in the vital records used in Nebraska as part of a national effort to establish uniform statistics. These records will be in use on January 1, 1989. Recently, proposed changes to the death certificate, with reasons for changes, were sent to the Nebraska Medical Association and other affected associations for review and comment. Proposed changes to the other vital records will be sent out over the next few months for similar reviews.

As a result of the passage of LB 74, the organ and tissue donation bill, the current death certificate has been revised to identify if consideration was given to organ donation at time of death.

ENVIRONMENTAL HEALTH AND HOUSING SURVEILLANCE: The Department is continuing to increase its capability and capacity for handling environmental health problems. The school asbestos program has been initiated with the recent employment of an Industrial Hygienist to lead efforts in regulating the asbestos worker activity and conducting school inspections. Also, and as reported recently in the Nebraska Medical Journal, the surveying of hospitals in the state is continuing for the purpose of measuring acute exposures to agricultural chemicals. In parallel with this effort, the private wells in Nebraska are being surveyed on a random basis to determine the presence and levels of these chemicals in the drinking water. To date, significant amounts of nitrates, pesticides, and radon have been found.

Recently too, the Environmental Protection Agency (EPA) announced that chlordane will no longer be sold by its manufacturer although current supplies may continue to be used. Subsequently, the Department of Health issued a press release advising those people whose homes

require termite treatment to consider the health risks involved with any pesticide being used. Chlordane, in particular, may be harmful in that it may cause long term damage to the liver and central nervous systems. Chlordane breaks down slowly in the environment and has been found in soil 30 years or more after treatment. Chlordane has also been found in some of private wells as a result of the survey described earlier.

LABORATORY SERVICES: Laboratory services are changing to meet today's demand for services. For example, Disease Control efforts to control AIDS is creating demand for AIDS testing. Drinking water contamination is causing demand for environmental testing of the ground water. In addition to changes in laboratory testing demand, changes in laboratory funding are occurring. Fees for service have been expanded to include more test types at the State Health Laboratory and there may be a continuation of expanding fee collection to more of the users of the laboratory. Currently, about 51% of the dollar volume of work is Department of Health programs work. This leaves about 49% of public health type of laboratory work to fee collection from laboratory users. A comparison of funding sources is shown below.

	State General Funds	Federal Funds	Fees
State of Nebraska Health Laboratory	17%	45%	36%
Average of 40 State Health Agencies	83%	10%	7%

Earlier this year, an expanded fee schedule for users of laboratory services was implemented. Fees are now collected from practically all private health care providers using the State Laboratory for Disease Control and Prevention work. Practically all private citizens and all public water supplies in Nebraska requesting water testing work pay user fees. During the last session of the Legislature, LB 1047 was enacted. It prescribes increasing fees for certain laboratory tests to cover the actual costs of testing. LB 1047 also prescribed the addition of certain tests and services which were not previously included in Title 177 NAC 5 for recovery of costs. Specimens collected on or after April 15, 1987, have been subject to the new fee rates which have been published and circulated.

Respectfully submitted,
Gregg F. Wright, M.D.
Director

REPORT OF THE COMMISSION ON LEGISLATION AND GOVERNMENTAL AFFAIRS

Ronald L. Klutman, M.D., Columbus - Chairman; Robert G. Osborne, M.D., Lincoln - Vice Chairman; Rodney S. W. Basler, M.D., Lincoln; Judith A. Butler, M.D., Superior; James H. Dunlap, M.D., Norfolk; Dale W. Ehlers, M.D., Lincoln; Richard D. Fitch, M.D., O'Neill; Charles Gregorius, M.D., Lincoln; Bruce W. Henricks, M.D., Fremont; Barbara M. Heywood, M.D., Papillion; Mark R. Hutchins, M.D., Lincoln; Max W. Linder, M.D., Lincoln; Ann E. Lott, M.D., Lincoln; John T. McGreer, III, M.D., Lincoln; Dennis G. O'Leary, M.D., Omaha; Dwaine J. Peetz, M.D., Neligh; Herbert F. Reese, M.D., Lincoln; C. Lee Retelsdorf, M.D., Omaha; Blaine Y. Roffman, M.D., Omaha; Jerald R. Schenken, M.D., Omaha; Todd S. Sorensen, M.D., Scottsbluff; Richard B. Svehla, M.D., Omaha; Timothy O. Wahl, M.D., Omaha; Wm. R. Marsh, M.D., Grand Island.

This report will carry information on the 1987 legislative session and present information on several of the issues we anticipate will be of importance to the Association in the 1988 session. The 1988 session will be

the second portion of the 90th Legislature and will be 60 days in length. Legislation not acted upon in the 1987 session is held over automatically for possible consideration in the 1988 session.

1. **LICENSING** - At the start of the 1987 legislative session, four health professions sought to be recognized through either certification or licensure: radiologic technicians, medical technologists, dietitians and nutritionists, and naturopaths. The Legislature did not approve any of these licensing requests.

In the area of radiation safety, the Legislature enacted amendments to the Radiation Control Act, which includes minimum training requirements for persons operating x-ray equipment. Under LB 390, persons who use licensed x-ray equipment and employ part-time operators must use operators who have taken a 16-hour safety education course and passed an examination approved by the Department of Health. The Department must adopt rules and regulations for the education course in accordance with the guidelines in LB 390. We do not anticipate the Health and Human Services Committee will act further on the radiologic technicians' licensure bill, LB 534. The Committee is still holding the bill to license medical technologists (LB 760) and this issue will be addressed further by our Commission in coming weeks. The bill to certify dietitians (LB 557) is also being held. The naturopaths' licensure bill was not introduced.

The Legislature approved amendments addressing constitutional problems with the 1986 law which gave optometrists authority to use topical pharmaceutical agents for therapeutic purposes (LB 116).

2. **WORKER'S COMPENSATION FEE SCHEDULE** - The Legislature, over the opposition of the Nebraska medical community, adopted a mandatory fee schedule for medical services under the Worker's Compensation Law (LB 187). The Worker's Compensation Court is empowered to set a fee schedule and providers will be prevented from charging in excess of the amount shown in the fee schedule for designated procedures.

3. **FOREIGN MEDICAL GRADUATES** - LB 390 contained a provision giving the Board of Medical Examiners authority to waive residency training requirements for graduates of foreign medical schools seeking to practice in physician shortage areas. The Board is authorized to waive up to two years of the required three year American residency for foreign medical graduates but the waiver decision is solely within the discretion of the Board.

4. **OTHER BILLS PASSED** - The Legislature also enacted bills which mandate that hospitals establish protocols requiring that relatives of decedents be asked about organ retrieval (LB 74); require the state to establish care management units for the elderly (LB 42); modify the metabolic disease testing program (LB 385), the immunization reporting system (LB 472), and the Health Manpower Act (LB 485); establish a state home health services program (LB 389); allow LPNs to be ambulance attendants in non-emergency situations (LB 442); and require rabies vaccines for cats (LB 104).

5. **HOLDOVER BILLS** - The Legislature deferred action on a number of issues, which will come up for consideration during the 1988 session. Among the major medical issues which will be considered are the legalization of living wills (LB 88); requiring motorcycle riders to wear helmets (LB 428); modifying the Nebraska Clean Indoor Air Act to require private employers to set up smoke-free work stations (LB 95); establishing proced-

ures for maintaining patient records and giving patients access to them (LB 256); adoption of an Adult Protective Services Act (LB 463); adoption of the Chemically Impaired Professionals Act, giving the Department of Health additional powers to deal with substance abuse by health professionals (LB 691); extension of the Department of Health review process of applications for new licensure or changes in a scope of practice (LB 384); and modifying the CON procedure (LB 410).

6. POSSIBLE 1988 LEGISLATION - There are currently several applications pending within the State Department of Health under the LB 407 procedure. The massage therapists have submitted an application requesting that the statutes regulating "massage" be amended to refer to "massage therapy". The Nebraska Department of Health has submitted a proposal under LB 407 to establish standards of training and supervision and to define the scope of duties for home health aides. The marriage and family therapists have submitted an application requesting licensure.

The Commission on Legislation and Governmental Affairs will meet in the near future to discuss the 1988 session of the Legislature. At that time we will consider the pending bills currently on the legislative schedule as well as potential legislation including the issue of the NMA developing an action plan for passage of seat belt legislation in Nebraska, as proposed in the resolution adopted during the House of Delegates Annual Session meeting.

The Commission anticipates the continued utilization of input by members of the Association and the Auxiliary. We feel the participation and involvement by the physician and auxiliary in the Senator's district is very important and an asset to the efforts of the Association. We invite the suggestions and comments of members of the Association regarding legislative activities at any time.

REPORT OF THE COMMISSION ON MEDICAL EDUCATION

Frederick F. Paustian, M.D., Omaha - Chairman; Robert L. Bass, M.D., Omaha; Warren G. Bosley, M.D., Grand Island; Patrick E. Brookhouser, M.D., Omaha; Charles F. Damico, M.D., Hastings; Charles A. Dobry, M.D., Omaha; A. Dean Gilg, M.D., Lincoln; William E. Lundak, M.D., Lincoln; Richard L. O'Brien, M.D., Omaha; Dwaine J. Peetz, Jr., M.D., Omaha; Joseph C. Scott, M.D., Omaha; Robert H. Waldman, M.D., Omaha.

The Commission on Medical Education has not conducted any meetings since the last meeting of the Nebraska Medical Association House of Delegates, 4/26-28/87, due to the lack of commission related business.

On November 13, 1986, the Accreditation Council for Continuing Medical Education, through their Review and Recognition Committee, conducted a site visit to the Nebraska Medical Association Commission on Medical Education as to the Commission's accreditation process of sponsors of continuing medical education programs. A letter was received from Howard S. Madigan, M.D., Chairman, Medical Review and Recognition, May 27, 1987, indicating continued recognition of the NMA-CME Accreditation Program for a period of six years, maximum allowable time. An interim report is to be submitted June, 1990, summarizing intrastate accreditation activities for the preceding three years. Among other commentary within the letter was the following paragraph:

"The reviewers and the CRR commend the NMA Commission on Medical Education for specific features of their Accreditation Program, viz., an ongoing

training program for site surveyors, the appointment of a student member of the NMA to the Commission, and the implementation of a precise, well planned accreditation process and procedure."

The Commission will hold its next meeting pending the receipt of progress reports and applications for accreditation from sponsors of continuing medical education programs within the State of Nebraska.

REPORT OF THE COMMISSION ON PUBLIC AFFAIRS

Rodney S. W. Basler, M.D., Lincoln - Chairman; H. Jeffery Deeths, M.D., Omaha; Herbert D. Feidler, M.D., Norfolk; Edward E. Gatz, M.D., Omaha; Donald T. Glow, M.D., Omaha; John J. Hoessing, M.D., Omaha; Roger P. Massie, M.D., Plainview; Donald E. Matthews, M.D., Lincoln; Harlan C. Shriner, M.D., Lincoln; F. Thomas Waring, M.D., Fremont.

Current activities of the Commission aimed at improving public relations through gratuitous public service include the preparation and distribution on a regular monthly basis of "Health Tips" and other news releases which describe new medical findings in terms easily understood by the general public. These short subjects are released to local newspapers and radio stations across the state. The Chairman was also privileged to be featured on Robert Osgood's nationally syndicated health network this summer.

We are again considering the production of the NMA President's annual "State of the Health" report which is produced for media representatives. Radio stations received fifteen 30-second recorded "spots" on health items by NMA President Doctor Walker which are often aired. We are planning to prepare a series of spots for current NMA President Doctor Cherry later this year. In addition, the Commission helped coordinate member participation in the televised "Health Line" series, and secure appropriate spokespersons for conferences and media interviews.

A number of new projects have been initiated which are intended to advance the concept of the physician as patient advocate, including the promotion of fitness, good health habits, and the attitude of wellness. A news release graphically presenting the recent data showing how relatively inexpensive health care has remained compared to other daily expenses is in preparation. This release reflects the sentiments expressed in Resolution #32 passed by the House of Delegates.

Better exposure to the press of selected Nebraska Medical Journal articles, including interviews with the authors, is expected to both increase lay interest and awareness and stimulate more member physicians to become contributors. A brochure explaining the various forms of health insurance and distribution systems was made available to NMA members for patient distribution.

REPORT OF THE SCIENTIFIC SESSIONS COMMITTEE

Sushil S. Lacy, M.D., Lincoln - Chairman; Mark A. Christensen, M.D., Omaha - Convention Chairman; David L. Bacon, M.D., Kearney; Robert A. Beer, M.D., Omaha; Richard A. Hranac, M.D., Kearney; Donald J. Larson, M.D., Lincoln; Richard M. Tempero, M.D., Omaha; Donald E. Waltemath, M.D., Lincoln; Rick J. Windle, M.D., Lincoln; Richard S. Yates, M.D., Lincoln; Eugene M. Zweiback, M.D., Omaha.

The Scientific Sessions Committee has begun its series of meetings to review the 1987 Annual Session and develop the program for the 1988 Session. The 1988 Annual Session will take place April 29-May 2, at the Marriott Hotel in Omaha.

The 1987 Annual Session reflected a change in format which included rescheduling the House of Delegates to meet on Sunday and Tuesday, rather than Friday and Sunday, as had been the case in recent years. The Fun Night activity was combined with the Sportsman's Day award banquet and this event was scheduled on Monday evening following Sportsman's Day activities. The scientific programming scheduled by specialty groups took place on Friday and Saturday.

The Scientific Sessions Committee has reviewed attendance and registration figures and has found that further modification in the format of the Annual Session is desirable.

The revised format would include combining the Inaugural Banquet, previously held on Sunday evening, and Fun Night scheduling this activity on Saturday evening. It has also been decided that the sessions of the House of Delegates should be rescheduled with the first session taking place on Friday, and the final two sessions taking place on Sunday. The Sunday sessions would be held consecutively with a brief intermission between the second and third session. Sportsman's Day would continue to be held on Monday afternoon with the possibility of a scientific or socio-economic seminar scheduled on Monday morning. Scientific programming by specialty groups would be held on Friday, space permitting, and Saturday. Thursday would also be available for specialty group sponsored meetings if so desired by the individual group.

The Scientific Sessions Committee feels that this change in format will be beneficial in accommodating attendance by a greater number of Association members.

Future meetings of the Scientific Sessions Committee will include representatives of the specialty groups. The Committee anticipates that the various segments of the program will be completed in the near future and publicized to members of the Association.

REPORT OF THE AD-HOC COMMITTEE RE: BLUE SHIELD OF IOWA-MEDICARE

Paul E. Collicott, M.D., Lincoln - Chairman; Richard Blatny, M.D., Fairbury; Steve Brase, Lincoln; Thomas M. Connors, M.D., Omaha; Bob Gallion, Lincoln; Vernon Garwood, M.D., Lincoln; Louis J. Gogela, Jr., M.D., Beatrice; Mrs. Diane Landers, Omaha; Roger Massie, M.D., Plainview; Mrs. Janice Olson, Lincoln; Donald Pavelka, M.D., Omaha; Richard B. Svehla, M.D., Omaha; Hiram R. Walker, M.D., Kearney.

The Ad-Hoc Committee Re: Blue Shield of Iowa-Medicare has met on three separate occasions, including two meetings with the Iowa Blue Shield personnel. The Iowa Blue Shield personnel seemed quite sincere about addressing and alleviating the problems that Nebraska physicians are experiencing. Many of the problems seem to lie on poorly completed claims submission forms from physicians, and lack of Blue Shield personnel due to limited funding from HCFA. Blue Shield has promised to send updated MAAC's to all Nebraska physicians.

The committee has felt that in the future the Nebraska Medical Association should sponsor a workshop on CPT coding for physicians and office staff, including how to file claims and how to follow up on claim problems. The committee feels that Blue Shield needs to work with physicians to develop more consistent methods in the way that claims are filed and handled in Nebraska.

Several discussions were held by the committee on the

three tiered payment system. Since this matter is being addressed at the federal level, it was deemed appropriate that the position of the NMA should be to encourage the proper development of the issue at the national level. The committee will continue to study this issue further. There was some indication that Iowa Blue Shield would be receptive to a change if the results would be cost neutral.

There is now a good line of communication with Blue Shield, but the company has not yet committed to offering physicians an 800 number for inquiry purposes. Further improvement of lines of communication has been developed by Blue Shield of Iowa through the development of regional workshops across the state for physicians and office personnel.

The committee has also arranged for Blue Shield and HCFA representatives to be present at the Fall Session to give a brief presentation and then be available after the House session to discuss problems with individual physicians and delegates.

This committee has worked hard and diligently to answer the problems raised by the resolutions of the House of Delegates at the Annual Session and feels that all issues have been addressed and the findings have been referred to the Board of Directors for their deliberation and further consideration.

REPORT OF THE AD-HOC COMMITTEE ON YOUNG PHYSICIANS

Richard A. Raymond, M.D., O'Neill - Chairman; Gary W. Barth, M.D., Hastings; John I. Cherry, M.D., Lincoln; Norman Grosbach, M.D., Omaha; Herbert A. Hartman, Jr., M.D., Omaha; Katherine A. Keifer, M.D., Kearney; Jeanette L. Masek, M.D., Lincoln; Kirk B. Muffly, M.D., Omaha; Timothy P. O'Holleran, M.D., North Platte; Mark D. Pilley, M.D., Omaha; Bradley D. Rodgers, M.D., Holdrege; Wm. A. Schiffermiller, M.D., Omaha; Vincent J. Sutton, M.D., Hastings.

President Dwight Cherry formed an Ad-Hoc Committee on Young Physicians, asking me to chair this committee, to evaluate the needs and concerns of young physicians in Nebraska, and also to assess ways to increase membership of young physicians in the Nebraska Medical Association. Formation of this ad-hoc committee was in response to an AMA request that all state medical associations look into the problems of non-participation by young physicians, non-membership and also the special needs of young physicians. The AMA definition of a young physician is any practicing physician that is under the age of 40, or has practiced less than 5 years.

Dr. Bill Shiffermiller and myself attended the interim AMA meeting in December and the annual AMA meeting in June in Chicago as alternate delegate and delegate respectively to the Young Physicians' Section of the AMA. This is a new section of the AMA with similar goals as those mentioned previously. At those meetings, we heard discussion from the 50 delegates across the United States as to problems in their local societies with attempting to become active in their medical associations. It became clear to us that the largest problem young physicians have in becoming active in their political associations is on the coasts, and that the mid-western states do not have the similar problem of resistance of the "old guard" in allowing young physicians an active position in their medical societies.

After the interim meeting in December, we began an active recruitment process getting young physicians to belong to the ad-hoc committee to explore the physicians needs and methods to incorporate young physicians into the political structure of the NMA and their component

medical societies. We recruited names of young physicians who might take part from local society directors, etc. and experienced a great deal of frustration in trying to find young physicians who would get together for ad-hoc committee meetings. After three scheduled dates that had to be rescheduled because of lack of attendees, we finally did hold the initial meeting of the Ad-Hoc Committee on Young Physicians on March 26, 1987 with about one half of the committee in attendance. We discussed the stated goals of the NMA for the young physicians of the state and came up with the idea that perhaps the best way to reach young physicians is by having regional meetings with key speakers on medical political topics in the evenings so physicians would not have to leave their practices. The initial meetings were scheduled for Omaha, Lincoln, and Grand Island. The initial meeting was held in Omaha with the key speaker being the AMA Trustee, Jerald Schenken, M.D. This meeting was attended by 16 physicians with 2 of those being from northeast Nebraska. A similar meeting was held in Lincoln with several speakers and again 12 physicians attended. The attendance at both of these meetings was discouraging and felt to indicate to us that further meetings of this nature would be non-profitable. Meetings were scheduled for Grand Island but only 2 physicians responded that they would come and that meeting was cancelled.

Membership in the NMA by young physicians is high. The percentage of young physicians that are dues paying members of the NMA closely parallels that of the entire medical community itself. Therefore, it is not felt that there is a problem in membership, but more a problem is young physicians simply not having time to commit to the medical association due to multiple factors. The key factors seem to be family commitment, building young practices and paying off large school loans. Time away from a young practice is more apt to be harmful than time away from a well established practice by an older physician. It is the feeling of this committee that young physicians in Nebraska are willing to be dues paying members, but are not willing to commit the time that it takes to be politically active. This may be changed by local involvement in local medical societies by key physicians that are identified by members of the societies, but it is not felt that the Nebraska Medical Association has an effective way to identify these individuals and that further meetings of the Ad-Hoc Committee may not be fruitful.

It is my own personal opinion that young physicians in Nebraska can be as active as they wish, and as their time allows, in the Nebraska Medical Association. I would encourage all delegates and local medical society leaders to identify those physicians who want to take an active role and encourage them to do so, and notify the NMA offices of young physicians who would like to be active at the state level so they can be identified and mainstreamed into various committees, etc.

REPORT OF THE COMMISSION ON HOSPITAL MEDICAL STAFF

Glen F. Lau, M.D., Lincoln - Chairman; Charles Heider, Jr., M.D., North Platte; Harry E. Keig, M.D., Papillion; Barney B. Rees, M.D., Omaha; Joseph G. Rogers, M.D., Lincoln; Larry D. Ruth, M.D., Lincoln; Steven A. Schwid, M.D., Omaha; Jerry K. Seiler, M.D., Hastings; Wm. A. Shiffermiller, M.D., Omaha; Stephen D. Torpy, M.D., Omaha.

The Commission on Hospital Medical Staff of the Nebraska Medical Association met on August 27, 1987, at the NMA Headquarters Office, Lincoln, Nebraska.

A general discussion by all members present led to the following conclusions:

1. The Commission, as it now exists, is adequate to meet the needs of the Nebraska Medical Association and the physicians of Nebraska.
2. The problems of urban and rural medical staffs may be entirely different and the Commission must be sensitive to the needs of both groups.
3. A considerable volume of important information is generated by the AMA HMSS. This information must get out to the medical staffs in a timely fashion.
4. An attempt should be made to hold a general meeting of representation of the medical staffs of all the hospitals in Nebraska.
5. There are concerns that Sunderbruch is planning to serialize the appellate review of charts rather than having this body meet as a group during PRO appeals.

To address these conclusions, the Commission plans to take the following actions in the next several months:

1. We will obtain the names of the Chiefs of Staff of all the hospitals in Nebraska. The help of the NHA will be solicited to obtain the information. Once we have this information, we will poll all of the Chiefs of Staff to determine if there is interest in having a general meeting the day prior to the next annual meeting of the NMA. Topics of material will also be solicited from the Chiefs of Staff.
2. We will also summarize the information disseminated from National HMSS and transmit this directly to the Chiefs of Staff, emphasizing the importance of some of this information.
3. We feel that the PRO Overview Committee is better suited to address the concern about the change of policy of Sunderbruch. Accordingly, we will send a copy of our minutes to the Overview Committee, so that they may either confirm our concern and address its implications, or provide us with accurate information.
4. The Commission feels that while the medical staff problems in Nebraska are not as numerous or as serious as they are on either coast, the tendency is there for them to work their way to the midwest. We should be aware of these and be prepared to aid our medical staffs in Nebraska.

REPORT OF THE NMA PRO OVERVIEW COMMITTEE

M. Jack Mathews, M.D., Lincoln - Chairman; David Bacon, M.D., Kearney; Steven T. Bailey, M.D., Omaha; A. H. Bergman, M.D., Fremont; Dennis M. Connolly, M.D., Lincoln; Carl J. Cornelius, Jr., M.D., Sidney; Richard A. Cottingham, M.D., McCook; Francis D. Donahue, M.D., Omaha; Daniel S. Durrie, M.D., Omaha; John F. Fitzgibbons, M.D., Omaha; C. T. Frerichs, M.D., Beatrice; Gordon J. Hrnicek, M.D., Grand Island; Frederick F. Paustian, M.D., Omaha; Richard A. Raymond, M.D., O'Neill; Herbert E. Reese, M.D., Lincoln.

PART I

This Committee was formed following the Spring meeting of the House of Delegates and is an outgrowth of resolutions before the House of Delegates at that meeting. The charge to the Committee included (1) investigation and review of problems experienced by NMA members with the PRO. (2) Review of the PRO operation, its policies, and contractual relationships. (3) An attempt to determine the fiscal performance as regards cost benefit within the State of Nebraska. (4) To advise and

recommend to the Board of Directors and the President issues concerning the PRO. (5) Advise mechanisms for education of Nebraska physicians regarding the process, rules, and functioning of the PRO. The Committee has been gathering information and assessing the operation of the PRO as performed by Sunderbruch of Nebraska (TSCN). The formulation of a plan to advise, improve, and correct inequities in the operation of the PRO through communication with Sunderbruch of Nebraska, HCFA, AMA, The Nebraska congressional delegation, and the Department of HHS is under consideration.

The reason for changing of the HCFA contract from the Kansas Foundation for Medical Care to the Iowa Foundation for Medical Care and TSCN was reviewed. In summary, the contract prior to 1986 was held by the Nebraska Foundation for Medical Care which "sublet" the contract to the Kansas Foundation for Medical Care. The KFMC utilized Nebraska physicians for the review during their contract period. Prior to the expiration of the contract period, which terminated in 1986, apparently HCFA rules were altered such that one entity such as NFMC could no longer be awarded the contract and sublet the contract to another entity such as KFMC which actually operated the PRO. NFMC was not in a position because of lack of staff, computers, data base, and other considerations to bid on the contract. Three bids were submitted with the IFMC/Sunderbruch Corporation ultimately being selected by HCFA. The factors and reasons for making this choice on the part of HCFA are not known to the members of this Committee.

The relationship between NFMC Inc. and Iowa Foundation for Medical Care (IFMC) was addressed. Review of the agreement between the IFMC and TSCN, the Nebraska PRO, suggests that the NFMC will provide Nebraska physicians for chart review, and for serving on committees and subcommittees. Based on review of the available data, this agreement is embodied in the form of a letter to IFMC from Dr. Herbert E. Reese on behalf of the NFMC. (Reference is made to Exhibit 1 at the conclusion of the report.) The contract between HCFA and IFMC has been requested for file in the NMA office. Your Committee Chairman met with Mr. Kenneth Neff and Dr. John Coe to better acquaint himself with the operation of TSCN. Discussion of procedures, specific questions relating to review process, selection of physicians for review, part played by review coordinator, and information relating to cost-benefit ratio were discussed.

At the July 15, 1987, meeting, the PRO Overview Committee invited as guests Mr. Rick McMasters, Administrator of Sunderbruch of Iowa; Fred Ferree from the Sunderbruch Corporation of Iowa; Dr. David Thomas, Medical Director of Sunderbruch Corporation; and Mr. Kenneth Neff of TSCN.

Members of IFMC and Sunderbruch of Iowa and Nebraska were appraised of the frustrations of the Nebraska physicians. These included in part:

- 1) Lack of outstate on-site review.
- 2) Lack on the part of the physician reviewer to TSCN to contact the attending physician to discuss a case when contemplation of a denial of any type was considered. This omission is contrary to the stated objectives of HCFA as reflected in letters by William L. Roper, M.D., Administrator for HCFA and Mr. Richard H. Husk, Director, Office of Medical Review, Health Standards and Quality Bureau, HCFA.
- 3) Desire and request on the part of the members of the Committee for TSCN reviewer who has actually

reviewed a patient file with an alleged quality issue or possible denial to sign any letter going to the attending physician.

- 4) Review of charts dating over 18 months of age and applying 1987 criteria which were not in effect when the patient was actually hospitalized.
- 5) Possibility/probability of non-physician reviewers preferentially "selecting" certain physician reviewers.
- 6) Questioned by TSCN indicates they need more reviewers and, at the same time, there is ample evidence that many physicians who have agreed to review have been called no more than once or twice in a 12-month period.
- 7) Internal quality control mechanism by TSCN was questioned.
- 8) The marked inconvenience and apparent inflexibility of the location and occasionally the times of the reconsideration hearings. This is particularly true for physicians in "non-urban" areas of Nebraska.
- 9) Quality the thoroughness of chart review by physician and non-physician reviewers for TSCN.
- 10) The review/sanction process and chart review process were discussed. (Reference is made to Exhibit 2 at the conclusion of report.)
- 11) Several other items and details of procedure were discussed.

IFMC/TSCN RESPONSE TO THE AFORE-MENTIONED POINTS:

Two letters, one from Mr. Richard Husk, and the other from Dr. William Roper, previously mentioned, stated in writing that "Should the physician reviewer contemplate a denial of Medicare payment, he is to make every effort to discuss the case with the attending physician". Not only is this not being done, but the reviewing physician fails to sign the letter and thus the attending physician cannot identify the reviewing physician to discuss the case in retrospect. IFMC/TSCN responded by indicating that the letters are not signed by the reviewing physician in Iowa. There is no contractual obligation for the reviewing physician to sign a letter of denial. Signature is the option of the reviewing physician. When the attending physician calls the office of Sunderbruch, no physician is available usually to discuss the identified patient case in question. This problem is created by the fact that physician reviewers frequently review the charts in their office or at home and not necessarily on the premises of TSCN. It might be possible to "patch" a call through to the reviewing physician, however, the practical matter of contacting the reviewing physician at any given time might be difficult, time-consuming, and cumbersome.

The identification of the reviewing physician by either signature or accessibility by telephone was felt by TSCN representatives to open up the possibility of negative impact on the reviewing physician's own practice and "harassment".

In response to Item 4, TSCN indicated that they were unaware that they would be requested to perform review of charts which were dated prior to their actual contract, but that this was a directive of HCFA (either at the final signing or actually following that contract closure date) and they had no choice in the matter.

Item 5 was answered by TSCN by indicating that this

was probably related to availability of the physician reviewer. They admitted that the review coordinator could preferentially select certain physicians over others. The possibility of affirmative action on the part of the review coordinator or non-physician reviewers, particularly at reconsideration hearings, was discussed and questioned, and TSCN made note of this allegation on behalf of our Committee.

In response to questions about internal quality control (Item 7), TSCN responded by indicating that a) the Nebraska Contract was new as of late 1986. b) Start up time was required. c) It usually takes 90 days to adequately assess quality of reviewers utilized by TSCN.

The other items were discussed as well as several other issues and are contained in the minutes of our meetings.

The dialogue between the representatives of Sunderbruch of Iowa and Nebraska and the PRO Overview Committee was considered helpful to both sides. It was the feeling of the Committee that the Sunderbruch representatives became very aware of many of the frustrations of Nebraska physicians and gave verbal commitment to correct, improve, and/or address them. The information pamphlets initiated under the direction of Mr. Ken Neff, we feel, is a helpful step in this direction.

PART II

Resolutions referred to this Committee by Reference Committee 1 and the House of Delegates at the time of the spring session were reviewed and discussed.

Resolution #1 - Subject: Sunderbruch Corporation/PRO. The initial portion of this resolution reads: "Be it resolved that (1) the NMA send letters to the Sunderbruch Corporation Nebraska encouraging them to actually and carefully review charts". The Committee notes that a meeting was held between the PRO Overview Committee and representatives of the Sunderbruch Corporation on July 15, 1987 at NMA Headquarters in Lincoln, Nebraska. Representatives of the Sunderbruch Corporation previously referred to were present. A significant amount of time was spent in discussion of the problems and common difficulties and concern of the physicians of the NMA who are involved in the review process. The Committee feels it has addressed and communicated this concern to TSCN.

(2) "Copies of this letter be sent to HCFA regional and national offices, the Congressional Delegation, and the AMA national office". The Committee notes a number of congressional representatives have been informed already. It is the feeling of the Overview Committee that careful documentation of the problems and difficulties must first be outlined so that there can be careful followup in each and every instance involved.

(3) "A letter be sent to Dr. John Coe, Medical Director of the Sunderbruch Corporation Nebraska, encouraging him to take steps to ensure that his personnel actually and carefully examine all charts prior to sending letters to physicians and hospital personnel." This has been effected by the resolution itself with Dr. Coe being present at the spring meeting of the NMA and through direct conversation with Committee members.

(4) "Further encourage Dr. Coe to retract letters that contain false and potentially damaging accusations." The Committee noted after much discussion that the letters were generic; that identification and documentation on a case by case basis would be preferable and most effective.

Resolutions #2, #3, #6, and #34 were considered together since their intent is very much the same. Resolution #2 asking for a watch dog committee to field and investigate complaints; Resolution #3 providing a watch dog committee to ferret out reviewers and make names known to Nebraska physicians and the general public; Resolution #6 of the Northeast Medical Association to make every effort to obtain information about all reviewers; Resolution #34 asking that reviewing physicians identify themselves and invite attending physicians to contact them for clarification and additional information before any action is taken by the PRO that could lead to ultimate sanction of the attending physician. These concerns have been addressed previously. A letter written by Mr. Richard Husk, Director of the Office of Medical Review, Health Standards and Quality Bureau, was received. In addition to his comments about physician reviewers contacting the attending physician, he also stated: "Criteria used by PRO's do not constitute physician standards of care. Criteria are established for use by PRO non-physician personnel in screening cases for referral to physician reviewers. The physician reviewer is to rely on his professional expertise and training in deciding whether to approve or deny Medicare payment".

Members of the Overview Committee felt that on many occasions the reviewer was not doing all things possible to prevent aggravation to the attending physician in certain cases. It was the opinion of the Committee based on information received that reviewers may feel intimidated by non-physician personnel of TSCN.

The Committee directly urged representatives of TSCN/IFMC to have all their reviewing physicians identify themselves and help clarify possible problems and difficulties that they see in their review process of a chart. They are encouraged to use communication directly with the attending physician at the time of review.

Resolutions #4, #5, and #7 were considered as a unit as they are basically involved with the monies spent for the peer review organization. Resolution #4 stated, "Be it resolved that the Nebraska Medical Association collect data on wasteful use of the taxpayer's money and regularly provide this information to the general public." Resolution #5 states, "The Nebraska Medical Association make this data and dollar cost known to the general public and make every effort through out elected representatives to change the law and prevent payment to said reviewers who make inappropriate denials." Resolution #7 concerns the PRO and the Sunderbruch Corporation and NFMC and relates to anticipated or projected \$5 savings for every dollar received from HCFA. The Overview Committee concluded that there was no practical way that the Nebraska Medical Association can force data from the various intermediaries, i.e., HCFA, the Sunderbruch Corporation of Nebraska, at the present time. Exploration of ways to obtain this data and to convert this data to useful information, however, is appropriate. The Committee felt that cost-effectiveness should be pursued by elected representatives, the general public, individual physicians and their patients.

Resolution #17 relates to the publication of the review procedure, which has been done by an information bulletin from TSCN and will be published in the Nebraska Medical Journal. It was felt that this should be published before further evaluation of due process and the PRO can be considered. The AMA is addressing this issue.

Resolutions #12, #21, #27, #29, and revised Resolution #28 were again reviewed. Resolution #29 was addressed by the Reference Committee of the House of Delegates and it was recommended that Resolution #29

not be adopted. Resolutions #12, #21, #27, and revised Resolution #28 have all basically the same content relating to officers, directors, delegates of the NMA, AMA, and other NMA members also being involved in varying degrees with the PRO. The Southwest Nebraska Medical Society desired that revised Resolution #28 be dealt with specifically and separately. The Committee noted that during the spring meeting of the House of Delegates in 1986, that a policy was adopted that no Nebraska Medical Association officer or Board of Director member could serve with the Nebraska Foundation for Medical Care. However, the revised Resolution #28, specifically states that it be resolved that no elected officer of NMA, NMA Board of Director, member of the NMA Board of Councilors, AMA delegate or alternate, NMA delegate or alternate, NMA salaried employee(s) should be an employee of TSCN and thus carry conflict of interest inherent in the employed position. The resolution further states, "Be it further resolved that any current officer of the NMA, member of the Board of Directors, member of the Board of Councilors, AMA delegate or alternate, NMA delegate or alternate, or salaried employee of the NMA now serving in such conflict of interest circumstances should be encouraged to either resign their positions in the NMA or resign their employed positions with such federal agency or contractual subsidiary." The majority feeling of the Overview Committee is that this resolution, if enacted, would create a circumstance in which it would be almost impossible to have knowledgeable, appropriate, and Nebraska-based physicians serve on the appropriate committee(s) and deal with Nebraska problems. It would then become a matter of professional reviewers, not a physician in private practice, who would be doing much or all of the review. Many of the physicians on the Overview Committee felt this would lessen the likelihood of effective and appropriate review by the PRO and decrease the likelihood that future unofficial dialogue would occur. It would also increase the difficulty that TSCN would have in their contractual relationship with the Sunderbruch Corporation of Iowa and the contractual relationship with HCFA. This ultimately might have very detrimental effects on the practicing physicians of Nebraska. Based on the above considerations, it was the recommendation of the majority of the Committee that revised Resolution #28 not be adopted.

In conclusion, it was felt that no further action needed to be taken on Resolutions #12, #21, #27, and #29.

EXHIBIT I

NEBRASKA FOUNDATION FOR MEDICAL CARE, INC.

Suite 700 CTU Building
1221 N. Street
Lincoln, Nebraska 68508
Telephone: (402) 474-7471

August 5, 1986

Iowa Foundation for Medical Care

Colony Park - Suite 500
3737 Woodland Avenue
West Des Moines, IA 50265

RE: Availability of Nebraska Physicians

Ladies and Gentlemen:

This letter confirms arrangements between us under which we will make available to you, should you be designated to serve as the PRO for Nebraska, a sufficient number of licensed doctors of allopathic and osteopathic medicine and surgery in Nebraska to assure adequate peer review in accordance with the PRO contract and with applicable law and regulations. It also confirms our readiness to assist you in staffing suitable physician committees and subcommittees in Nebraska.

As you know, the Nebraska Foundation for Medical Care is a Nebraska nonprofit corporation. Its membership is comprised of approximately 80 percent of the licensed doctors of allopathic and osteopathic medicine engaged in the practice of medicine and surgery in Nebraska. It currently serves as the physician-sponsored PRO for Nebraska. It is not seeking renewal of the PRO contract.

We are ready, willing and able, upon award of the Nebraska PRO contract to you, to maintain and make available to you a list of licensed doctors of allopathic and osteopathic medicine engaged in the practice of medicine and surgery in Nebraska who are available to do peer review. We are also ready, willing and able to take such steps as may be necessary to assure that the list includes a sufficient number of such doctors to accomplish adequate peer review in accordance with the PRO contract and with applicable law and regulations, including at least one such doctor in every recognized medical specialty. These conditions are met at this time. We understand that payments for conduct of review will be made directly by you to the individual reviewing physician.

We are also ready, willing and able to assist you in selecting Nebraska physicians to serve on such committees and subcommittees as may be necessary or appropriate for effective performance of the PRO contract, including a comprehensive review committee and a quality assurance/sanction subcommittee, both as described in your response to RFP-HCFA-86-075/PG. We understand that our role will be advisory only.

Sincerely,

Herbert E. Reese, M.D.
President

HER:mc

EXHIBIT II

REVIEW/SANCTION PROCESS

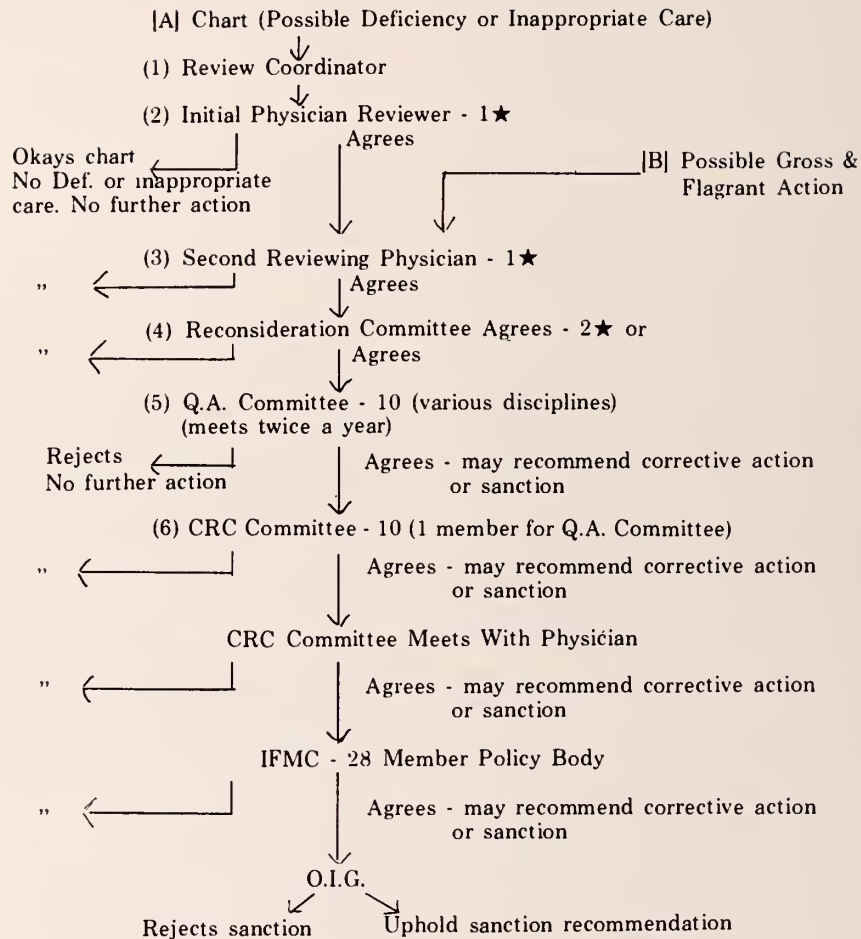
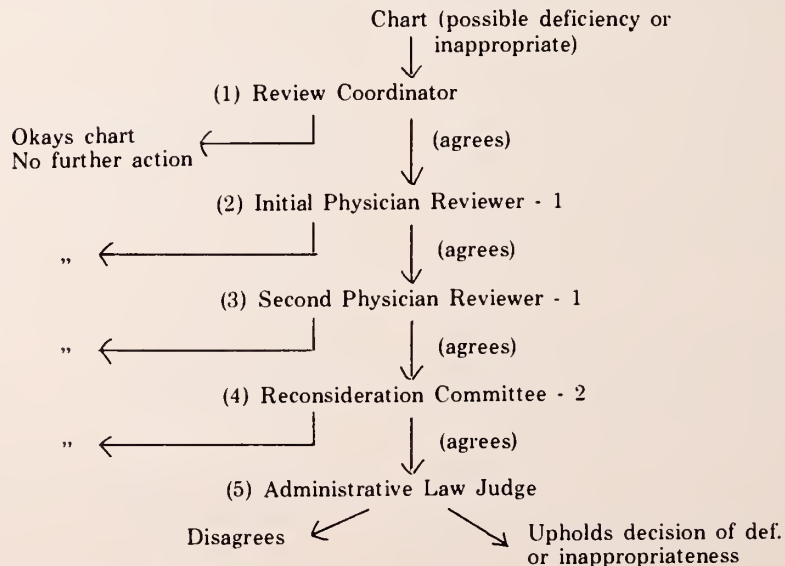


CHART REVIEW PROCESS



REPORT OF THE COMMISSION ON ASSOCIATION AFFAIRS

Harry W. McFadden, M.D., Omaha - Chairman; R. A. Blatny, M.D., Fairbury; Stuart P. Embury, M.D., Holdrege; Joel T. Johnson, M.D., Kearney; Bernard L. Kratochvil, M.D., Omaha; Walter O'Donohue, M.D., Omaha; Herbert E. Reese, M.D., Lincoln; Joseph E. Stitche, M.D., Lincoln; R. C. Weldon, M.D., Nebraska City.

The Commission on Association Affairs met by telephone call on September 1, 1987. Several items were discussed and our report is herewith submitted to the House of Delegates.

1. The Commission serves as the Association's liaison to the Nebraska Medical Association Auxiliary. The President of the Auxiliary, Mrs. Colleen Adam, reported on several Auxiliary activities including the Medi-File Project. This is a statewide project that has been initiated in the Metro Omaha Medical Society area thus far. Physicians across the state will be informed of the project in coming weeks. The Auxiliary is also working from the AMA's Health Initiative this year dealing with health problems of the adolescent. In addition, the Auxiliary is scheduling regional, county auxiliary meetings across the state. Our Auxiliary is also participating as a co-host in a multi-state conference scheduled in Des Moines. The Nebraska input for the conference will center on health projects.

THE COMMISSION ON ASSOCIATION AFFAIRS RECOMMENDS THAT THE NEBRASKA MEDICAL ASSOCIATION AUXILIARY BE COMMENDED FOR ITS ACTIVITIES AND THE MANY WORTHWHILE PROJECTS IT CURRENTLY HAS UNDERWAY.

2. The Commission discussed several recommendations from the Annual Session meetings of the Board of Councilors and House of Delegates pertaining to Associate Membership. The Board of Councilors has recommended that the proposal for a member to receive Associate Membership status should emanate from the physician's county medical society as is the case with a recommendation for Life Membership. The Commission concurred with this recommendation. The Commission also considered the matter of a Board of Directors recommendation that the Associate Member be asked to pay dues at a level of approximately 10% of the current active status dues amount. This amount would be in addition to that the Associate Member pays for NMA mailings should he/she desire to receive them.

The Commission agrees the 10% figure should be included in the By-Laws with a provision permitting the Board of Directors to change the level of dues paid if felt necessary to do so at some future time.

The Commission also discussed the wordage which currently pertains to Life Membership in the By-Laws which refers to the fact that if a Life Member should return to practice and/or its related activities, unless he/she has practiced for 45 years, his/her Life Membership should terminate upon resumption of such practice or activities. The Commission feels that similar wordage should be prepared referring to the Associate Membership category without reference to a specific number of years in practice.

THE COMMISSION RECOMMENDS THAT THE HOUSE OF DELEGATES APPROVE THE FOLLOWING POINTS AND THAT APPROPRIATE WORDAGE THEN BE PREPARED TO OFFICIALLY AMEND THE BY-LAWS AT THE 1988 ANNUAL SESSION:

A. THAT THE REQUEST OR RECOMMENDATION FOR ASSOCIATE MEMBERSHIP ORIGINATE AT

THE COUNTY MEDICAL SOCIETY, THE BOARD OF COUNCILORS THEN DETERMINE THE RELATIVE FACTS AND SUBMIT THE REQUESTS WITH THEIR FACT DETERMINATION TO THE HOUSE OF DELEGATES FOR ACTION.

B. A DUES LEVEL OF 10% OF THE CURRENT ACTIVE STATUS DUES AMOUNT BE ESTABLISHED FOR THE ASSOCIATE MEMBER. THIS AMOUNT TO BE IN ADDITION TO THE AMOUNT THE ASSOCIATE MEMBER PAYS FOR NMA MAILING, WITH THIS FEATURE REMAINING OPTIONAL, AND THAT THE NEBRASKA MEDICAL ASSOCIATION BOARD OF DIRECTORS BE PERMITTED TO CHANGE THE LEVEL OF DUES PAID IF IT FELT APPROPRIATE OR NECESSARY TO DO SO AT SOME FUTURE TIME.

C. AN ASSOCIATE MEMBER SHOULD RETAIN THAT MEMBERSHIP STATUS AS LONG AS THE MEMBER REMAINS RETIRED FROM ACTIVE PRACTICE AND ITS RELATED ACTIVITIES, AND IF HE/SHE SHOULD RESUME SUCH PRACTICE OR ACTIVITIES HIS/HER ASSOCIATE MEMBERSHIP STATUS WOULD TERMINATE AND IT WOULD BE REQUIRED THAT THE INDIVIDUAL ONCE AGAIN ASSUME AN ACTIVE MEMBERSHIP STATUS.

3. The Commission discussed the advisability of establishing specific wordage for the By-Laws covering the tabulation of years in practice as it relates to determining membership status. There currently exists a stipulation that an Associate Member must have been in practice for 25 years and the requirements of acceptance for Life Membership carry years in practice numbers of 40 and 45 years. Historically, the years in practice have been tabulated based on the year of graduation from medical school. The Commission feels that this is the appropriate mechanisms to utilize and recommends that appropriate wordage be prepared for specific inclusion in the By-Laws in this regard.

THE COMMISSION ON ASSOCIATION AFFAIRS RECOMMENDS THAT THE HOUSE OF DELEGATES ESTABLISH, AS POLICY, THAT YEARS IN PRACTICE BE DETERMINED BY TABULATION FROM DATE OF GRADUATION FROM MEDICAL SCHOOL AND THAT APPROPRIATE AMENDMENTS TO THE BY-LAWS BE PREPARED FOR CONSIDERATION AT THE 1988 ANNUAL SESSION.

4. The Commission then considered the possibility of a By-Law change providing for the utilization of a parliamentarian to assist the Speaker and Vice Speaker of the House. It was recognized that the Association operates under Sturgis Parliamentary Procedure which provides for the use of a parliamentarian when it is felt that the utilization of this individual is necessary. The Board of Directors has requested the Commission on Association Affairs discuss this issue and determine if it would be advisable to include wordage in the By-Laws covering the issue of a parliamentarian being available. The Commission discussed this issue and determined that it would be beneficial to have appropriate provision for utilization of a parliamentarian carried in the By-Laws.

THE COMMISSION ON ASSOCIATION AFFAIRS RECOMMENDS THAT THE CONCEPT OF CARRYING WORDAGE IN THE BY-LAWS REFERRING TO THE VOLUNTARY USE OF A PARLIAMENTARIAN BE APPROVED BY THE HOUSE OF DELEGATES AND THAT APPROPRIATE WORDAGE BE PREPARED FOR CONSIDERATION AND FINAL APPROVAL AT THE 1988 ANNUAL SESSION.

5. The Commission reviewed the previous action of the House of Delegates relating to the seating of the Immediate Past President and the AMA Delegates and Alternate Delegates in the House with voting privileges. This action was approved at the 1987 Annual Session. Legal counsel has prepared the wordage to accomplish this action and inasmuch as changes will also be necessary in the Articles of Incorporation, the final action on this issue will need to take place at the 1988 Annual Session.

The Commission presents this report to the House of Delegates for its consideration and stands ready to assume additional responsibilities that may be forthcoming from this session.

REPORT OF THE AD-HOC COMMITTEE ON ALTERNATE HEALTH PLANS

Dale E. Michels, M.D., Lincoln - Chairman; Lonnie S. Althers, M.D., Lincoln; Vernon F. Garwood, M.D., Lincoln; Robert L. Haag, M.D., Lincoln; Michael J. Haller, M.D., Omaha; Roger D. Mason, M.D., Omaha; Margaret A. Moravec, M.D., Lincoln; Richard H. Meissner, M.D., Omaha; Dwaine J. Peetz, Jr., M.D., Omaha; Layton F. Ridders, M.D., Omaha; Sebastian J. Troia, M.D., Omaha.

The Ad-Hoc Committee on Alternate Health Plans has not had opportunity or need to meet again over the last six months. The Association in conjunction with the law firm of Cline, Williams, Oldfather and the excellent assistance of Pamela Hastings Carrier continues to provide our membership with information in regard to specific contracts. In addition, the American Medical Association is in the process of developing a contract review and analysis service for its membership.

With the increased activity in the area of PPO's, the recent entry of Blue Cross/Blue Shield of Nebraska into the PPO marketplace, it is anticipated that the committee will need to meet between the fall and spring sessions to update information that needs to be disseminated to the membership. In the meantime, we will handle individual requests as they are received in the NMA office.

REPORT OF THE AD-HOC COMMITTEE ON HEALTH EDUCATION AND ATHLETIC MEDICINE

Warren G. Bosley, M.D., Grand Island - Chairman; Patrick E. Clare, M.D., Lincoln; Richard W. Hammer, M.D., Lincoln; Stephen J. Lanspa, M.D., Omaha; Morris B. Mellon, M.D., Omaha; Paul H. Phillips, M.D., Scottsbluff; Richard A. Raymond, M.D., O'Neill; Eileen C. Vautravers, M.D., Lincoln; Hohart E. Wallace, M.D., Lincoln; Wesley G. Wilhelm, M.D., Omaha; Gregg F. Wright, M.D., Lincoln.

The Committee met on 3 September, 1987, at the NMA office.

The Committee first considered a statement on teen-age pregnancy, as first suggested in its report to the annual meeting of the House of Delegates in April, 1987. After much discussion the following is presented to the House for consideration as part of this report:

STATEMENT ON TEEN-AGE PREGNANCY

The Nebraska Medical Association believes that the occurrence of pregnancy in young women under the age of 19 years is one of the most urgent problems in our society today. Over one million such pregnancies occur each year. The economic, social, educational, and personal losses that result constitute a near-disaster for our society.

The Nebraska Medical Association believes that all elements of our society must cooperate in trying to reach a solution to this problem. The primary effort must be

educational, and this education must occur in all aspects of the life of children and young people. Educational programs in schools about human sexuality are, and should be, supplementary to the example and instruction given by parents throughout their children's lives. It is from the family that a child's first concepts of sexual responsibility arise.

It is important that everyone be aware of the high cost of teen-age pregnancy. The Nebraska Medical Association believes that it can be an effective catalyst in the consideration of this problem. It can bring together people and organizations who are equally concerned. There are many such organizations, and their efforts to reduce the incidence of pregnancy in too-young women ought to be coordinated and made more effective by this coordination.

The years lost by young people as a result of unplanned and unwanted pregnancy concern all of us. Responsibilities as parents require young people to lose precious years of education. The economic cost of supporting young families is borne by all of us and extends for many years after the event of pregnancy, often starting a tradition of social and economic dependence on public agencies.

Physicians, as responsible counselors for family health, have a unique opportunity in the prevention of too-early pregnancy, offering guidance and assistance to parents as their children grow and as they develop an awareness of their sexuality. It is important that this opportunity not be missed, and that physicians emphasize to their patients all aspects of healthy and responsible living whenever possible. They should be ready to provide guidance to all persons who want information on sexual matters. Young people should have access to medical advice and consultation as they need it. Physicians should be a primary source for information of this kind for young people and should participate actively in efforts to enhance their health education at every level. And they must remind parents and others that if we wish to change the behavior of young people we must improve the payoff for acceptable behavior.

The Committee proposes that a conference be planned, involving the representatives of organizations concerned with adolescent development and teen-age pregnancy to begin discussions and coordination of the efforts being made to resolve or understand the problems facing young people in our society. The Committee recognizes that early pregnancy may be a symptom of more fundamental problems, but it believes that the effort in behalf of our children justifies the time and effort.

The Medical Auxiliary has agreed to conduct a survey of schools in Nebraska, to determine as closely as possible what educational programs exist. With the cooperation of other organizations, it should be possible to use this information to share successful programs and to improve others. The Committee hopes to present the results of this survey in its next report to the House of Delegates.

In its concern for athletic medicine, the Committee reviewed various subjects for consideration at later meetings. These include the use of steroids by high school and early college athletes and other students; the role of the physician in evaluating a young athlete's development and maturity, recommending the level at which he/she might participate; and training programs for volunteer coaches. The Committee proposes that programs on athletic medicine again be developed as part of the annual session of the Association. In cooperation with the Committee on Scientific Sessions, this Ad-Hoc Committee requests permission to proceed with this plan.

Board of Councilors

The Fall Session meeting of the Board of Councilors was held September 10, 1987 at the Cornhusker Hotel, Lincoln, Nebraska.

The meeting was called to order by the Chairman, Dr. Frerichs.

Roll call showed the following members present: Drs. Richard Svehla, C. T. Frerichs, Wm. Chleborad, R. W. Herpolsheimer, Robert Quick, Floyd Shiffermiller, Stanley Nabity, Donald Fischer, Donald Wilkinson, L. D. Cherry, and C. A. McWhorter.

Election of the Chairman of the Board of Councilors was called for by Dr. Frerichs. The motion was made and seconded to reelect Dr. Frerichs, and this was approved.

Election of the Secretary of the Board of Councilors was called for by Dr. Frerichs. The motion was made and seconded to reelect Dr. Quick, and this was approved.

Dr. Frerichs called for approval of the Annual Session minutes, and these were approved as printed in the July, 1987 issue of the Nebraska Medical Journal.

The Board of Councilors considered the reports and resolutions contained in the Handbook.

There was discussion regarding the Physicians Advocacy Committee and it was thought that more information was needed regarding this committee. Dr. McWhorter described briefly how this committee operated, and following discussion it was moved that Dr. Kelsey and his colleagues be asked to appear at the next meeting of the Board of Councilors and also the House of Delegates. This was approved.

The requests for Life Memberships and Associate Memberships were considered and approved.

Dr. Cherry discussed membership with the Councilors and urged each Councilor to obtain new members from their individual District.

There was considerable discussion regarding the relationship of the NMA with the NFMC. It is the opinion of the Board of Councilors that their role in the NFMC has been, to the best of their ability, the advocacy of practicing physicians and their patients. Every attempt has been made to represent them with fairness. The Board of Councilors decided to study and assess further its relationship with the NFMC and its role in its activities, particularly as individual Councilors.

There being no further business, the meeting was adjourned.

House of Delegates

FIRST SESSION

The First Session of the fall meeting of the House of Delegates was held on September 11, 1987, at the Cornhusker Hotel, Lincoln, Nebraska.

The meeting was called to order by the Speaker, Dr. Meissner. Roll call showed 64 delegates present, and the meeting was declared in session.

The House of Delegates recognized Mr. William Schellpeper for his twenty five years of service to the Nebraska Medical Association.

Dr. Meissner called for approval of the Annual Session minutes of the House of Delegates and these were approved as printed in the July, 1987 Nebraska Medical Journal.

Oral reports were presented by the following:

Dr. Stanley R. Shane, Associate Dean, University of Nebraska College of Medicine

Dr. Alan Fruin, Creighton University School of Medicine

Dr. Gregg Wright, Director, State Department of Health

Dr. Paul Collicott, Chairman of the Board of Directors Subcommittee on Non-Dues Income and Chairman of the Ad-Hoc Committee Re: Blue Shield of Iowa-Medicare

Sally Wood, Vice President of Government Programs, Iowa Blue Shield-Medicare

Dr. F. Wm. Karrer, Chairman, Ad-Hoc Committee on Tumor Registry

The following Reference Committee assignments were made:

REFERENCE COMMITTEE #1

Item 1, Report of the Board of Directors - Appointment of NMA/PRO Overview Committee

Report of the Commission on Hospital Medical Staff

Report of the NMA/PRO Overview Committee

Resolution #1 - Lancaster County - Nebraska Medical Association Membership Advocacy

Resolution #7 - Cheyenne-Kimball-Deuel - Change in PRO Review Mechanisms

Resolution #8 - Cheyenne-Kimball-Deuel - Unacceptable Reason for Poor Quality Review by PRO

Resolution #10 - C. J. Cornelius, Jr., M.D. - Strategies for Dealing with HCFA Hospital Mortality Rate Publication

Resolution #11 - Southwest Nebraska Medical Society Opposition to NMA Officers, Directors, Councilors, AMA Delegates and Alternates, Salaried NMA Employees Serving as Simultaneous Employees of Federal Professional Review Organizations or Contractual Subsidiaries

Resolution #13 - Metro Omaha - The Release of Mortality Statistics by the Federal Government

Resolution #14 - Lincoln County Medical Society - PRO/HCFA

Minutes of the Board of Councilors

REFERENCE COMMITTEE #2

Item 8, Report of the Board of Directors - Ad-Hoc Committee on Non-Dues Income

Item 9, Report of the Board of Directors - Physician Dispensing

Report of the University of Nebraska College of Medicine

Report of the Creighton University School of Medicine

Report of the Commission on Medical Education

Report of the Ad-Hoc Committee on Young Physicians

Report of the Ad-Hoc Committee on Health Education and Athletic Medicine

REFERENCE COMMITTEE #3

Item 3, Report of the Board of Directors - Medicare Three-Tiered Rate Structure

Item 4, Report of the Board of Directors - Omnibus Reconciliation Act Patient Notification

Item 5, Report of the Board of Directors - Ad-Hoc Committee on Blue Cross/Blue Shield of Iowa - Medicare

Item 6, Report of the Board of Directors - Physician Dealings with Medicare

Report of the Delegate to the AMA

Report of the Ad-Hoc Committee on Blue Cross/Blue Shield of Iowa - Medicare
 Resolution #5 - Metro Omaha - Notification to Patients of Charge Amounts Prior to Service as Per Omnibus Reconciliation Act of 1986
 Resolution #6 - Metro Omaha - E.O.B. to all Physicians
 Resolution #2 - Metro Omaha - Medicare-MAAC
 Resolution #12 - Lancaster County Medical Society - Utilization Review

REFERENCE COMMITTEE #4

Item 7, Report of the Board of Directors - Vice Speaker Pro-Tem
 Item 12, Report of the Board of Directors - Associate Membership
 Report of the Nebraska Department of Health Requests for Life and Associate Membership and Fifty-Year Practitioners
 Report of the Commission on Association Affairs

REFERENCE COMMITTEE #5

Item 13, Report of the Board of Directors, NMA Building
 Item 14, Report of the Board of Directors - Membership
 Item 15, Report of the Board of Directors - Physician Manpower Statistics
 Item 16, Report of the Board of Directors - Financial Charts and Membership Figures
 Report of the Commission on Legislation and Governmental Affairs

REFERENCE COMMITTEE #6

Item 2, Report of the Board of Directors - Study of Uncompensated Care
 Item 10, Report of the Board of Directors - AIDS
 Item 11, Report of the Board of Directors - 1988 Annual Session Format
 Report of the Commission on Public Affairs
 Report of the Scientific Sessions Committee
 Resolution #3 - Metro Omaha - Commendation of Congressional Delegation
 Resolution #4 - Metro Omaha - National Study of Resource Based Relative Value Scales for Physician Services
 Resolution #9 - Metro Omaha - AIDS
 Reports of the Ad-Hoc Committee on Alternate Health Plans

There being no further business, the House was recessed until Saturday morning.

House of Delegates

SECOND SESSION

The second session of the House of Delegates was called to order by the Speaker, Dr. Meissner. Roll call showed 54 delegates present and the meeting was declared in session.

The Chair called for approval of the minutes of the first session, and these were approved as printed.

An oral report was presented by Dr. Dunlap, Chairman, Ad-Hoc Committee on Professional Liability.

Reports of the Reference Committees were called for and the following were presented.

Reference Committee #1

Reference Committee #1 considered 4 reports and 7 resolutions. The Reference Committee submits the following report and recommendations.

(1) ITEM 1, REPORT OF THE BOARD OF DIRECTORS - APPOINTMENT OF NMA/PRO OVERVIEW COMMITTEE

Significant discussion occurred with the general feeling that the PRO Overview Committee be appointed as a standing (continuing) committee. Its members would be appointed for staggered three-year terms. The Overview Committee would: (1) serve as an advocate for Nebraska physicians and patients where appropriate; (2) investigate and review problems experienced by Nebraska Medical Association members involving the professional review organization; (3) review the professional review organization including its policies and contractual relationships; (4) advise and make recommendations to the Board of Directors and the President of the NMA on issues concerning the professional review organization; (5) interact with the contracted PRO organization for Nebraska in support of Nebraska physicians and patients where appropriate; (6) establish a subcommittee on grievances to review, assess and evaluate complaints from Nebraska physicians concerning the professional review organization medical utilization review process and subsequently make recommendations for action to the Overview Committee.

Recommendations:

1. Your Reference Committee recommends that the PRO Overview Committee be given standing committee status.
2. The charge to the Committee encompass the above items.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was seconded. It was moved to amend this section so that the Ad-Hoc Committee would continue until such time as the By-Law changes can be made and adopted. This was approved.

(2) REPORT OF COMMISSION ON HOSPITAL MEDICAL STAFF

There are concerns that Sunderbruch is planning to serialize the appellate review of charts rather than having the body meet as a group during PRO appeals. This terminology was not fully understood by the review committee. Those testifying at the Reference Committee also had difficulty understanding the intended procedure. It was felt that if the review of charts at the appellate review were serialized, (going from one reviewer to another) rather than reviewed as a complete committee, this would be objectionable. However, public clarification of this is in order.

The remainder of the Report of the Commission on Hospital Medical Staff was reviewed. There was no further discussion.

Recommendations:

1. The Committee recommends adoption of the report of the Commission on Hospital Medical Staff.
2. The issue of serialized review should be clarified by the appropriate NMA committee.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(3) MINUTES, BOARD OF COUNCILORS

The Board of Councilors minutes were accepted by the Reference Committee.

Recommendation:

The minutes of the Board of Councilors be accepted.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(4) REPORT OF NMA/PRO OVERVIEW COMMITTEE

The report of the NMA/PRO Overview Committee is listed in two portions. This section of our report will deal with Part I. One of the recommendations of the Reference Committee is that we go on record as requiring the reviewing physician to stand behind his or her decision in the review by asking them to sign the review, and signing the letter to the attending physician. Also, internal quality control would require internal quality control with performance reports and that these should be given to the Nebraska Medical Association and its members. Mr. Brennan of Health Care Financing Agency, Kansas City, Missouri, was a guest and reviewed a number of the various difficulties associated with the Nebraska Foundation for Medical Care, the Sunderbruch Corporation-Nebraska and the Health Care Financing Agency. Mr. Brennan stated that the HCFA representative for this region is Mr. John L. Swetnam of 601 E. 12th St., Room 225, Kansas City, MO. He encouraged physicians who have difficulties and problems with the PRO to contact Mr. Swetnam if they have not had satisfaction of grievances from the Sunderbruch Corporation-Nebraska. A copy of the contract between HCFA and TSCN will be requested. Also, information about the cost to HCFA will be requested from Mr. Swetnam of the Kansas City office.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(5) REPORT OF NMA/PRO OVERVIEW COMMITTEE

This section involves the resolutions of the spring meeting of 1987 of the Nebraska Medical Association. Resolution #1 read that, "Be it resolved that: (1) the Nebraska Medical Association send letters to the Sunderbruch Corporation-Nebraska and encourage them to carefully review charts."

A meeting was held with the representatives of the Sunderbruch Corporation on July 15, 1987, at the NMA Headquarters Office in Lincoln, with the PRO Overview Committee. A significant amount of time of discussion was used in review of difficulties and problems concerning physicians in the Nebraska Medical Association and the review process. The Committee feels it has addressed and communicated these concerns to TSCN. (2) that copies of letters be sent to HCFA regional and national office, the congressional delegation and the AMA national office. This was felt to be more effective than each member of the NMA sending letters where there are problems and difficulties, and that there is careful documentation of those difficulties in each and every instance. (3) that a letter be sent to Dr. John Coe, Medical Director of the Sunderbruch Corporation, encouraging him to take steps to ensure that his personnel actually and carefully examine all charts prior to sending letters to physicians and hospital personnel. Since Dr. Coe is resigning from this position shortly, it is felt that a letter to the new medical director of Sunderbruch Corporation of Nebraska will be more appropriate. (4) encourage Dr. Coe to retract letters that contain false and potentially damaging accusations. Again, it would be necessary that these actually be documented on a case-by-case basis and be sent to the Overview Committee with that option.

Recommendation:

It is the recommendation of the Reference Committee that this section of the report be accepted in lieu of the Resolution #1.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(6) RESOLUTIONS #2, #3, #6, and #34 FROM SPRING MEETING, 1987

Resolutions #2, #3, #6, and #34 were considered. These resolutions basically ask for a watchdog committee. Discussion in the Reference Committee favored establishing a watchdog committee as noted previously. An interim "watchdog committee" had been appointed this last summer. It was also noted a letter written by Mr. Richard Husk, Director of the Office of Medical Review, Health Standards and Quality, was received. Because these resolutions have been complied with, it was felt that Resolutions #2, #3, #6, and #34 (A/87) need not be adopted.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was seconded, and a motion was made to adopt this section of the report in lieu of these resolutions. This was approved by the House.

(7) RESOLUTIONS #4, #5, and #7 OF THE ANNUAL SESSION, 1987

The topics concerned the money spent for the peer review organization. Significant discussion in this regard was also given by Mr. Brennan of the Kansas City office of the NCFA. He stated that further information in this regard can be obtained from the Kansas City office at 601 E. 12th St., Room 225, Kansas City, MO, c/o John L. Swetnam. It is our opinion that since this has been reviewed in the report of the PRO Overview Committee it will be an ongoing effort of that Committee. It is therefore our recommendation that no further action is needed on these resolutions. We recommend adoption of this portion of our report in lieu of Resolutions #4, #5, and #7 of the Annual Session, 1987.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(8) RESOLUTION #17 - ANNUAL SESSION, 1987

This resolution related to the publication and review procedure. Review information has been published in a bulletin from TSCN and will be published in the Nebraska Medical Journal. (This information appears at the end of the minutes of the House of Delegates) This resolution read as follows:

WHEREAS, Nebraska physicians have recently received from the Sunderbruch Corporation (Iowa PRO) and the Nebraska Foundation for Medical Care (Nebraska PRO) an outline of the goals and objectives of the PRO which include indications that sanctioning of physicians will be considered based on possible problems of quality, and

WHEREAS, the appeals process as outlined in the December, 1986 pamphlet did not meet generally accepted standards for due process, and

WHEREAS, it was not specifically stated that concerns over quality would be afforded due process appeals prior to notification of hospitals and patients; Therefore be it

RESOLVED, that the Nebraska Medical Association

tion strongly urge the Nebraska Foundation for Medical Care (Nebraska PRO) to develop a meaningful system of due process which recognizes the rights and needs of both physicians and patients.

(House action, 1987, Annual Session: "It was the recommendation of the participants in the discussion that action be deferred on this issue until publication of the review procedure and due process has been accomplished.)

Recommendation

It is the recommendation of the Committee that Resolution #17 be adopted as it has already been accomplished.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(9) RESOLUTIONS #12, #21, #27, #29, AND REVISED RESOLUTION #28 - ANNUAL SESSION, 1987

The basic intent of these resolutions was again brought up in Resolution #11 which will be addressed later in this report. Resolution #12 and #21 (A/87) have already been accomplished, therefore, we would recommend these resolutions, #12 and #21, not be adopted. Also, it is the recommendation of the Committee that Resolution #27, #29 and revised Resolution #28 also not be adopted since their basic intent will again be reviewed as noted later on.

Recommendations:

1. Resolution #12 not be adopted and the Reference Committee report be accepted in lieu of Resolution #21.
2. Resolutions #27, #29 and revised Resolution #28 also not be adopted since their basic intent will again be reviewed as noted later on in this report.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(10) RESOLUTION #1 - LANCASTER COUNTY MEDICAL SOCIETY - NEBRASKA MEDICAL ASSOCIATION MEMBERSHIP ADVOCACY

This resolution reads as follows:

WHEREAS, the Nebraska Medical Association continues to support the delivery and availability of quality of care to all citizens, and

WHEREAS, cost-efficient delivery of medical care remains the concern of all physicians as well as patients, and

WHEREAS, the Nebraska Medical Association continues to support peer review in a non-adversarial system to accomplish the continued availability of quality health care in a cost-effective manner, and

WHEREAS, Nebraska physicians are increasingly experiencing and adversarial relationship with TSCN and perceive support between NMA and TSCN, and

WHEREAS, numerous resolutions at the 1987 Annual Meeting House of Delegates dealt with various aspects of the PRO process and the relationship between NMA and TSCN, and

WHEREAS, these resolutions did not specifically address the NMA policy regarding the NMA membership and PRO-TSCN;

BE IT THEREFORE RESOLVED, that the NMA establish a clear written policy to be an advocate for NMA members and their patients when the PRO process compromises quality of care or fails to follow reasonable due-process, and

BE IT FURTHER RESOLVED, that the NMA Board of Directors evaluate each PRO problem situation and be empowered to act as an advocate for the NMA member, including legal recourse if deemed appropriate.

Resolution #1 was discussed. It was felt by the Reference Committee that a wording change should be done in the last paragraph, as follows, "that the NMA Board of Directors evaluate or cause to be evaluated each PRO problem, situation, and be empowered to act as an advocate for the NMA member, including appropriate recourse if deemed proper."

Recommendation:

The recommendation of the Reference Committee is to adopt revised Resolution #1.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(11) RESOLUTION #7 - CHEYENNE-KIMBALL-DEUEL MEDICAL SOCIETY - CHANGE IN PRO REVIEW MECHANISMS

This resolution reads as follows:

WHEREAS, other state PRO's are able to carry out many of the activities denied Nebraska's outstate physicians, such as on-site review and regional or local reconsideration hearings;

THEREFORE, BE IT RESOLVED, that the Sunderbruch Corporation be encouraged to review its procedures and develop mechanisms for some outstate on-site reviews and for some local and regional reconsideration hearings.

Resolution #7 was revised to delete the word "some" in the next to last sentence and in the last sentence so the resolution would read, "THEREFORE, BE IT RESOLVED, that the Sunderbruch Corp. be encouraged to review its procedures and develop mechanisms for outstate, on-site review and for local and regional reconsideration hearings." Some discussion indicated that this would be more expensive to the Sunderbruch Corp., however, the Reference Committee noted that the members present desire to have review on-site as much as possible.

Recommendation:

It is the recommendation of this Committee that a revised Resolution #7 be adopted.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(12) RESOLUTION #8 - CHEYENNE-KIMBALL-DEUEL MEDICAL SOCIETY - UNACCEPTABLE REASON FOR POOR QUALITY REVIEW BY PRO

This resolution reads as follows:

Resolution #8

WHEREAS, officials of the PRO have repeatedly stated that certain aspects of the review process are not possible due to fiscal restraints, and

WHEREAS, fiscal limitation is unacceptable as a reason for poor quality review;

THEREFORE, BE IT RESOLVED, that the Nebraska Medical Association inform the PRO that fiscal limitation is unacceptable as a reason for poor quality review.

It was the general consensus if appropriate review is done, this should be carried out without an excuse such as financial constraint.

Recommendation:

It is the recommendation of the Reference Committee that this resolution be adopted.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

- (13) RESOLUTION # 10 - C. J. CORNELIUS, M.D. - STRATEGIES FOR DEALING WITH HCFA HOSPITAL MORTALITY RATE PUBLICATION
RESOLUTION #13 - METRO OMAHA MEDICAL SOCIETY - RELEASE OF MORTALITY STATISTICS BY THE GENERAL GOVERNMENT

These resolutions read as follows:

Resolution #10

WHEREAS, HCFA has recently published for comment in the Federal Register a plan to publish Medicare mortality statistics for each participating hospital, and

WHEREAS, such statistics will have little or no validity unless corrected for patient's age, other medical problems, intensity of service required, severity of illness and numbers of Medicare recipients admitted in each diagnostic category, and

WHEREAS, these figures will be unbelievably skewed for small hospitals with small numbers of procedures or diagnosis per category, and

WHEREAS, there seems to be little regard for validity in this undertaking;

THEREFORE, BE IT RESOLVED, that the NMA request the AMA to develop guidelines or strategies for dealing with these statistics and for informing the public of the limited value of such listing.

Resolution #13

WHEREAS, the Federal Government through the Health Care Financing Administration, HCFA, plans to publish a new list of death rates at each of the 6,000 U.S. hospitals that care for Medicare patients, and

WHEREAS, release of less sophisticated mortality data last year brought a flood of complaints from the hospital industry; therefore

BE IT RESOLVED, that the NMA should vigorously support the AMA's efforts in negotiations with HCFA to insure that the mortality statistics, if released, be adjusted re: differences in severity of illness and the other diagnostic categories currently being developed, and

BE IT FURTHER RESOLVED, that the NMA be prepared to evaluate and respond to published death rates of hospitals in Nebraska.

These resolutions were considered together as their basic intent is quite similar. These have to do with strategies for dealing with HCFA hospital mortality rate publication and the release of mortality statistics by the federal government. Discussion revealed that statistics in small community hospitals may be very skewed, and thus figures obtained and the validity of such would be very questionable. Also mentioned were the differences in the severity of illness and diagnostic categories which are being developed.

Recommendation:

It is the recommendation of the Reference Committee that Resolutions #10 and #13 be adopted.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

- (14) RESOLUTION #11 - SOUTHWEST NEBRASKA MEDICAL SOCIETY - OPPOSITION TO NMA OFFICERS, DIRECTORS, COUNCILORS, AMA DELEGATES AND ALTERNATES, SALARIED NMA EMPLOYEES SERVING AS SIMULTANEOUS EMPLOYEES OF FEDERAL PROFESSIONAL REVIEW ORGANIZATIONS OR CONTRACTUAL SUBSIDIARIES

This resolution reads as follows:

WHEREAS, physicians who represent the private practice of medicine in the State of Nebraska are encountering increasing difficulty in the administrative and fiscal management of their patients, and

WHEREAS, many of these difficulties are caused by interference in the patient/physician relationship engendered by various artificial rules and regulations established by federal legislation regarding professional review organizations, and

WHEREAS, these rules and regulations appear aimed at reducing costs with little attention to quality and completeness of care affected or altered by such reductions and costs, and

WHEREAS, substantially salaried employees (that is, those deriving greater than \$1,500 per month income) from such federal programs or contractual subsidiaries who serve in such capacity will have an overt "conflict of interest" where attempting to simultaneously serve the interests of the private practicing physician member of the Nebraska Medical Association;

THEREFORE, BE IT RESOLVED, that no elected officer of the NMA, of the NMA Board of Directors, member of the NMA Board of Councilors, AMA Delegates or Alternates, or NMA salaried employees shall be such an employee and thus carry such "conflict of interest" inherent to his employed position, and

BE IT FURTHER RESOLVED, that any current officer of the NMA, member of the Board of Directors, member of the Board of Councilors, AMA Delegate or Alternate, or salaried employee of the NMA now serving in such "conflict of interest" circumstance be requested to either resign their position with the NMA or resign their employed position with such federal agency or contractual subsidiary.

Significant discussion was generated both pro and con on the basic issues involved. The substance of this resolution was that a salaried employee who earns greater

than \$1,500 per month in income from such federal programs, or contractual subsidiaries who serve in such capacity, will have an overt conflict of interest, while attempting simultaneously to serve the interests of private practicing physician members of the NMA. The resolution was also revised to have in the last paragraph, "BE IT FURTHER RESOLVED, that any employee deriving greater than \$1,500 per month from a federal program such as HCFA or Sunderbruch Corp. that is current officer of the NMA, member of the Board of Directors, member of the Board of Councilors, AMA Delegate or Alternate or salaried employee of the NMA now serving in such conflict of interest circumstance be requested to either resign their position with the NMA or resign their employee position with such federal agency or contractual subsidiary."

Much of the relationship in this resolution was already prohibited and essentially the only new feature in this is the monetary consideration. This resolution has been reviewed on several occasions.

Recommendation:

The Reference Committee recommends that this resolution be presented to the House of Delegates for further discussion, and we would encourage a floor vote on this resolution.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was seconded. Following considerable discussion, this Resolution #11 was defeated by a floor vote of the House.

(15) RESOLUTION #14 - LINCOLN COUNTY MEDICAL SOCIETY - PRO/HCFA

This resolution reads as follows:

WHEREAS, the TSCN/PRO is mandated to monitor quality of care, and

WHEREAS, the PRO functions as a punitive, ex-post-facto error detection, cost control system, and

WHEREAS, cost control and quality assurance are often antithetical, and

WHEREAS, the physicians of Nebraska are interested in both quality and efficient medical care;

THEREFORE, BE IT RESOLVED, that the NMA challenge both the PRO and HCFA, both publically and politically, to develop a program that honestly promotes high quality and efficient medical care; and

BE IT FURTHER RESOLVED, that the NMA develop techniques to assist the physicians of Nebraska who wish to inform their patients about actions of the PRO/HCFA.

Discussion of Resolution #14 included several discussants who would favor the NMA and the AMA to both publically and politically develop programs that promote high quality and efficient medical care and encourage physicians to inform their patients about the actions of the PRO/HCFA.

Recommendation:

The recommendation of the Reference Committee is that the AMA and NMA both publically and politically develop programs and materials that will encourage high quality and efficient medical care and assist physicians in informing patients of the actions of the PRO/HCFA.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(16) NMA, NFMC AND SUNDERBRUCH CORP. NEBRASKA

Discussion was elicited on the issue of the association between NMA, NFMC and the Sunderbruch Corp. Nebraska. Pros and cons were given by multiple discussants. Essentially there is no formal association in the way of a contract between the Nebraska Foundation for Medical Care and the Sunderbruch Corp.-Nebraska. The only association is on the CRC and the Quality Assurance Committee and in providing physicians for review by the Nebraska Foundation for Medical Care. The NFMC has had no meetings for a significant period of time.

Recommendations:

1. The Reference Committee recommends that the NMA not dissolve or disassociate itself from the NFMC.

2. It also recommends that the NMA Board of Directors appoint the Board of Directors of the NFMC.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was seconded and discussion followed. Dr. Retelsdorf felt it would be advisable to amend the second recommendation specifying that it become effective only if legal review by NMA counsel supports this action as appropriate and feasible.

Questions were also posed pertaining to the NMA officers and councilors serving on the NFMC Board.

Dr. Cornelius thought the House did not have enough information to make an informed decision at this time, and he moved to refer this matter to the Board of Directors for clarification of these points and report back. This was approved by the House.

MR. SPEAKER, I MOVE THE ADOPTION OF THE REPORT OF REFERENCE COMMITTEE #1 AS A WHOLE AS AMENDED. This was adopted by the House.

Respectfully submitted,

August Bergman, M.D.,
Fremont - Chairman

M. Jack Methews, M.D., Lincoln
Frederick Paustian, M.D., Omaha

Reference Committee #2

Reference Committee #2 considered 7 reports. The Reference Committee submits the following report and recommendations.

(1) ITEM 8, REPORT OF BOARD OF DIRECTORS - AD-HOC COMMITTEE ON NON-DUES INCOME

Testimony was given encouraging use of the NMA-sponsored Visa card as a means of generating additional non-dues income. It was also pointed out that there is no late penalty fee should minimum payments not be made on a timely basis. Testimony was also given supporting endorsement of the AMA sponsored Medical Payment System and that ongoing steps are in progress for the finalization of the implementation of this program. The Committee recommends this report be accepted as presented.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(2) ITEM 9, REPORT OF BOARD OF DIRECTORS - PHYSICIAN DISPENSING

There was considerable discussion regarding the

importance of physicians alerting themselves of all rules and regulations regarding dispensing of drugs prior to implementing this practice. It was pointed out that the physician must register and be approved by the Board of Pharmacy and that this requires providing proper facilities and record keeping. The Committee recommends:

1. The acceptance of this report.
2. That the headquarters office reprint the article in the August 4, 1987, Nebraska Medical Association newsletter in their next bulletin, and
3. That the Board of Directors request the Department of Health send notice of these regulations to all physicians in the state.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(3) REPORT OF UNIVERSITY OF NEBRASKA COLLEGE OF MEDICINE

The Committee recommends acceptance of this report as written and also wishes to commend the governing bodies of the University of Nebraska Medical Center and the Creighton University for their continued investigation of benefits of cooperative effort.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(4) REPORT OF CREIGHTON UNIVERSITY SCHOOL OF MEDICINE

The Committee recommends acceptance of this report for informational purposes and also the Committee wishes to commend the governing bodies of Creighton University School of Medicine and University of Nebraska Medical Center for their continued investigation of benefits of cooperative effort.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(5) REPORT OF COMMISSION ON MEDICAL EDUCATION

The Committee wishes to emphasize the portion of this report indicating continued recognition of the NMA's CME accreditation program for a period of six years, the maximum allowable time. This is certainly of great value to all physicians in the state regarding their individual CME records. The Committee recommends acceptance of this report.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(6) REPORT OF AD-HOC COMMITTEE ON YOUNG PHYSICIANS

The Committee heard testimony emphasizing that the percentage of young physicians that are dues-paying members of the NMA closely parallels that of the entire medical community itself. The factors affecting the young physician's ability to become involved in state medical society proceedings were also emphasized. The Committee, was, therefore, in agreement with the recommendation of the Ad-Hoc Committee which encouraged all delegates and local county medical society leaders to identify those physicians who want to take an active role, and encourage them to do so, and that this indeed could probably be carried out on the local level.

Recommendations:

1. The Committee recommends acceptance of this report.
2. The Committee further recommends the Board consider dissolving this Committee.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(7) REPORT OF AD-HOC COMMITTEE ON HEALTH EDUCATION AND ATHLETIC MEDICINE

The Committee heard considerable testimony on the importance of sex education in the schools. It was felt the subject was covered well in the report with the exception that there should also be emphasis placed on the importance of morality and moral codes when discussing sexual issues. There was testimony regarding athletic medicine noting that the Nebraska Chapter of the American Academy of Pediatrics Sports Committee has done considerable work in the area of athletic medicine.

Recommendations:

1. The Committee recommends acceptance of this report.
2. The Committee recommends the Board of Directors consider integrating the Committee on Health Education and Athletic Medicine with representation from the Chapter of Pediatrics Sports Committee.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

MR. SPEAKER, I MOVE THE ADOPTION OF THE REPORT OF YOUR REFERENCE COMMITTEE #2 AS A WHOLE. This was adopted by the House.

Respectfully submitted,
Stanley F. Nability, M.D.,
Grand Island - Chairman
John Reed, M.D., Lincoln
Barbara Heywood, M.D., Papillion

Reference Committee #3

Reference Committee #3 considered 3 reports and 4 resolutions. The Reference Committee submits the following report and recommendations.

(1) ITEM 3, REPORT OF BOARD OF DIRECTORS - MEDICARE THREE-TIERED RATE STRUCTURE

There was discussion concerning this item and from this discussion it was felt that further action would be needed concerning this problem.

Recommendation:

That the Board of Directors request Blue Cross and Blue Shield of Iowa to undertake an impact study of a statewide profile.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(2) ITEM 4, REPORT OF BOARD OF DIRECTORS - OMNIBUS RECONCILIATION ACT PATIENT NOTIFICATION

There was considerable discussion concerning this requirement, however, until definitive information becomes available concerning the definition of elective procedures and other guidelines, no further action would seem possible.

Recommendation:

This report should be filed for information.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(3) ITEM 5, REPORT OF BOARD OF DIRECTORS - AD-HOC COMMITTEE ON BLUE CROSS/BLUE SHIELD OF IOWA-MEDICARE

The actions of the Ad-Hoc Committee over the last six months were explained.

Recommendation:

That this item be filed for information.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(4) ITEM 6, REPORT OF BOARD OF DIRECTORS - PHYSICIAN DEALINGS WITH MEDICARE

This problem has been referred to the Ad-Hoc Committee.

Recommendation:

That this item be filed for information.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(5) REPORT OF DELEGATE TO AMA

Dr. Roffman was present to answer any questions concerning this report.

Recommendation:

This report be filed for information.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(6) REPORT OF AD-HOC COMMITTEE ON BLUE CROSS/BLUE SHIELD OF IOWA-MEDICARE

This report was discussed by Dr. Collicott. During discussion, further information concerning the physician 800 number phone inquiry line was given. Blue Cross/Blue Shield of Iowa is quite anxious to have this line available and will begin implementation as soon as approval for its is received from HCFA. The approximate cost per year for this line is \$100,000.

Recommendations:

1. That the Ad-Hoc Committee and the representatives of Blue Cross/Blue Shield of Iowa be commended for their efforts to establish a cooperative climate between the physicians and the third-party carrier.

2. That physicians be encouraged by the NMA to attend educational workshops concerning CPT coding and claims submission as well as followup on claim problems.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(7) RESOLUTION #5 - METRO OMAHA MEDICAL SOCIETY - NOTIFICATION TO PATIENTS OF CHARGE AMOUNTS PRIOR TO SERVICE AS PER OMNIBUS RECONCILIATION ACT OF 1986

The necessity and purpose of this resolution were discussed by Dr. Svehla. This resolution reads as follows:

WHEREAS, the receipt of MAAC (maximum allowable actual charges) are not always promptly received from Medicare, and

WHEREAS, the individual physician cannot with accuracy predict what portion of the MAAC Medicare will actually pay, and

WHEREAS, the individual physician has little access of information giving amounts that secondary insurance companies will reimburse the patient, and

WHEREAS, the Department of Health and Human Services has failed to develop or provide the appropriate form to be given the patients;

THEREFORE, BE IT RESOLVED, that the Nebraska Medical Association through the American Medical Association work with Congress to repeal this feature of the Omnibus Reconciliation Act of 1986.

Recommendation:

We recommend the adoption of this resolution.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(8) RESOLUTION #6 - METRO OMAHA MEDICAL SOCIETY - E.O.B. TO ALL PHYSICIANS

This resolution reads as follows:

WHEREAS, payments from Medicare to both patients and physicians is a confusing and complicated problem, and

WHEREAS, the patient's personal physician is the most knowledgeable and helpful individual to protect the patient's rights regarding their payments by Medicare, and

WHEREAS, physicians that do not participate or accept assignments in their Medicare payments are denied E.O.B. (explanation of benefits);

THEREFORE, BE IT RESOLVED, that the Nebraska Medical Association through the American Medical Association request and support appropriate federal legislation to the effect that all physicians submitting Medicare claims be promptly furnished appropriate Medicare E.O.B. records.

The rationale for the denial of the explanation of benefits form to non-participating or physicians not accepting assignment was explained as a matter of preservation of patient confidentiality. It was further pointed out that many physicians, although not accepting assignment or participating, do submit Medicare claims for their patients and do act as advocates for their patients when there are problems with these claims.

Recommendation:

We recommend the adoption of this resolution.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(9) RESOLUTION #2 - METRO OMAHA MEDICAL SOCIETY - MEDICARE-MAAC

This resolution reads as follows:

WHEREAS, payment by Medicare for physician services is now under the MAAC regulations;

BE IT RESOLVED, that the Nebraska Medical Association be active in its education of members

about the MAAC and urge the AMA to work to eliminate the unfair fee rollbacks created by the current MAAC terminology.

There was quite a bit of discussion concerning this matter as well as considerable feelings that the resolution could be more precise.

Recommendation:

We offer the following substitute resolution:

WHEREAS, payment by Medicare for physician services is now under the MAAC regulations;

BE IT RESOLVED, that the Nebraska Medical Association continue to be active in its education of members about the MAAC, and

BE IT FURTHER RESOLVED, that the NMA, through its delegates to the American Medical Association, work for specific legislation to eliminate unfair fee distortions created by the current MAAC implementation.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(10) RESOLUTION #12 - LANCASTER COUNTY MEDICAL SOCIETY - UTILIZATION REVIEW

This resolution reads as follows:

WHEREAS, utilization review is a significant factor in health care delivery, and

WHEREAS, utilization review involves features such as precertification, second opinion, concurrent review, and

WHEREAS, these utilization review mechanisms directly influence patient care and outcomes;

THEREFORE, BE IT RESOLVED, that the Board of Directors of the Nebraska Medical Association seek legislation at the next legislative session of the State of Nebraska that will define "utilization review" as the practice of medicine.

Dr. Dunlap explained the ambiguities that are present concerning whether preadmission review, discharge review and concurrent review are a part of the practice of medicine. The state Attorney General has not issued a definite opinion concerning this and will not do so unless a specific case is brought before him. Because of the importance of this, it was felt that this ambiguity should be resolved.

Recommendation:

We offer the following substitute resolution:

WHEREAS, preadmission review, concurrent review and discharge review is a significant factor in health care delivery, and

WHEREAS, preadmission review, concurrent review and discharge review involves features such as precertification, second opinion, concurrent reviews, and

WHEREAS, these review mechanisms directly influence patient care and outcomes;

THEREFORE, BE IT RESOLVED, that the Board of Directors of the Nebraska Medical Association consider introducing legislation in the next legislative session of the State of Nebraska that will define preadmission review, concurrent review and discharge review as the practice of medicine.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

I would like to thank Drs. Svehla and Hranac for their assistance and Sally Wood, Tony Fosselman and Ed Brennan for their input to our Reference Committee.

MR. SPEAKER, I MOVE THE ADOPTION OF THE REPORT OF YOUR REFERENCE COMMITTEE #3 AS A WHOLE. This was adopted by the House.

Respectfully submitted,

George Voigtlander, M.D.,
Pawnee City - Chairman
Richard Svehla, M.D., Omaha
Richard Hranac, M.D., Kearney

Reference Committee #4

Reference Committee #4 considered 5 reports. The Reference Committee submits the following report and recommendations.

(1) REPORT OF BOARD OF DIRECTORS, ITEM 7

This item deals with the Board of Directors report, which in accordance with the By-Laws, appointed the Speaker of the House and the Vice Speaker Pro-Tem. The Board requests ratification of the appointment of Dr. Harry W. McFadden as Vice Speaker Pro-Tem for the 1987 Fall Session and the 1988 Annual Session. The new Vice Speaker will be elected at the 1988 Annual Session.

MR. SPEAKER, I MOVE THE APPROVAL OF THE ACTION OF THE BOARD OF DIRECTORS AND THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(2) REPORT OF COMMISSION ON ASSOCIATION AFFAIRS

The Commission submitted five items in their report. The first item dealt with the activities of the Nebraska Medical Association Auxiliary. The Commission on Association Affairs recommends that the Nebraska Medical Association Auxiliary be commended for its activities and the many worthwhile projects it currently has underway.

The second and third item in the report of the Commission on Association Affairs as well as Item 12 of the Report of the Board of Directors all dealt with the establishment of Associate Member status of the Nebraska Medical Association. The Commission recommends that the House of Delegates approve the following points and that appropriate wordage then be prepared to officially amend the By-Laws at the 1988 Annual Session.

A. The request for Associate Membership will originate at the county medical society. The Board of Councilors then determine the relative facts and submit the request with their fact determination to the House of Delegates for action;

B. The dues level of 10% of the current active status dues amount be established for the Associate Member. This amount to be in addition to the amount an Associate Member pays for NMA mailings, with this feature remaining optional, and that the Nebraska Medical Association Board of Directors be permitted to change the level of dues paid if it is felt appropriate or necessary to do so at some future time.

C. An Associate Member shall retain that membership status as long as the member remains retired from active practice and its related activities, and if he/she

should resume such practice or activities, his/her Associate Membership status would terminate and it would require that the individual once again assume an active membership status. The Commission on Association Affairs also recommends that the House of Delegates establish as policy that years in practice be determined by tabulation from the date of graduation from medical school and that appropriate amendments to By-Laws be prepared for consideration at the 1988 Annual Session.

Item 4 of the Commission's report dealt with the use of a parliamentarian to assist the Speaker and Vice Speaker of the House. The Commission on Association Affairs recommends that the concept of carrying wordage in the By-Laws referring to the voluntary use of a parliamentarian be approved by the House of Delegates and that appropriate wordage be prepared for consideration and final approval at the 1988 Annual Session.

Item 5 of the Commission's report was a statement that legal wordage is being accomplished for the final action on the issue of the Immediate Past President, the AMA Delegates and Alternate Delegates being seated at the Nebraska Medical Association House of Delegates with a vote.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(3) REPORT OF NEBRASKA DEPARTMENT OF HEALTH

The report of the Nebraska Department of Health was reviewed and accepted for informational purposes.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(4) REQUESTS FOR LIFE AND ASSOCIATE MEMBERSHIP, AND 1988 FIFTY-YEAR PRACTITIONERS

These requests are as follows:

LIFE MEMBERSHIP REQUESTS

ADAMS COUNTY MEDICAL SOCIETY

Theo. H. Koefoot, M.D., Hastings

LANCASTER COUNTY MEDICAL SOCIETY

Bowen E. Taylor, M.D., Lincoln

METRO OMAHA MEDICAL SOCIETY

John L. Barmore, M.D., Omaha

Charles Hranac, M.D., Omaha

Barney B. Rees, M.D., Omaha

Wm. Rumbolz, M.D., Omaha

F. Miles Skultety, M.D., Omaha

SEWARD COUNTY MEDICAL SOCIETY

Robert Herpolsheimer, M.D., Staplehurst

ASSOCIATE MEMBERSHIP REQUESTS

METRO OMAHA MEDICAL SOCIETY

Wallace Engdahl, M.D., Omaha

Gordon Johnson, M.D., Omaha

FIFTY YEAR PRACTITIONERS

ADAMS COUNTY MEDICAL SOCIETY

Don E. Murray, M.D., Hastings

Clarence R. Weber, M.D., Holiday Island, Ark.

BUFFALO COUNTY MEDICAL SOCIETY

Francis L. Richards, M.D., Kearney

CHEYENNE-KIMBALL-DEUEL MEDICAL SOCIETY

Chris U. Bitner, M.D., Sidney

DODGE COUNTY MEDICAL SOCIETY

Robert C. Reeder, M.D., Fremont

KEITH-PERKINS-CHASE MEDICAL SOCIETY

Ernest E. Colglazier, M.D., Grant

LANCASTER COUNTY MEDICAL SOCIETY

Louis J. Ekeler, M.D., Lincoln

Lee Stover, M.D., Lincoln

METRO OMAHA MEDICAL SOCIETY

Joseph F. Gross, M.D., Omaha

Henry J. Lehnhoff, Jr., M.D., Omaha

SCOTTS BLUFF COUNTY MEDICAL SOCIETY

Rush W. Karrer, M.D., Scottsbluff

Willard G. Seng, M.D., Oshkosh

SOUTHWEST NEBRASKA MEDICAL SOCIETY

John L. Batty, M.D., McCook

The lists of physicians submitted for Life Membership, Associate Membership and Fifty-Year Practitioners were accepted. The Fifty-Year Practitioners will be recognized at the 1988 Annual Session.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

MR. SPEAKER, I MOVE THE ADOPTION OF THE REPORT OF YOUR REFERENCE COMMITTEE #4 AS A WHOLE. This was adopted by the House.

Respectfully submitted,

Jon J. Hinrichs, M.D., Lincoln -
Chairman

John D. Griffiths, M.D., Omaha

Gary Smith, M.D., Newman Grove

Reference Committee #5

Reference Committee #5 considered 2 reports. The Reference Committee submits the following report and recommendations.

(1) ITEM 13, REPORT OF BOARD OF DIRECTORS - NMA BUILDING

The Board considered Resolution #33 (A/87) which asked it to explore the feasibility of purchasing or building a facility to house the Association and in so doing eliminate the need for office space rental expense. Based on the amount of space currently utilized by the Association with some minor leeway for expansion, it was determined that the cost of financing such a purchase would be considerably greater than current lease costs. It was determined that the proposal in the original resolution was not economically feasible. Discussion on this matter pointed out there was considerable effort to reach this decision. The Reference Committee commends the Board on its efforts.

Recommendation:

The Committee recommends that Item 13 of the Report of the Board of Directors be adopted as written.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(2) ITEM 14, REPORT OF BOARD OF DIRECTORS - MEMBERSHIP

The Board reviewed and considered the present membership situation which recognized that 71% of the active physicians in Nebraska were dues-paying members of the NMA at the close of 1986. It was noted that at the present time, the comparable figure is 68.5%, however, it is anticipated this percentage figure may well increase prior to the end of 1987. Discussion emphasized the need to sell membership in the Association on a one-on-one basis, to show that the prospective members should

belong because of many benefits they already enjoy due to the actions of the Nebraska Medical Association. The discussion indicated that NMA officers should visit outstate societies to emphasize the benefits of the membership.

Recommendation:

It is recommended that the NMA officers consider a program of visits to outstate medical societies to promote membership.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(3) ITEM 15, REPORT OF BOARD OF DIRECTORS - PHYSICIAN MANPOWER STATISTICS

This item dealt with a brochure which presents selected physician manpower statistics in the State of Nebraska. The Reference Committee commends the preparation of such succinct information in the brochure Nebraska Physician Facts - 1987 and recommends its adoption as written.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(4) ITEM 16, REPORT OF BOARD OF DIRECTORS - FINANCIAL CHARTS AND MEMBERSHIP FIGURES

The Board submits the financial charts and membership figures of the organization and these are indicative of a sound fiscal operation.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(5) REPORT OF COMMISSION ON LEGISLATION AND GOVERNMENTAL AFFAIRS

Considerable discussion concerning various portions of this report was heard. Under LB 390, persons who use licensed x-ray equipment and employ part-time operators must use operators who have taken a 16-hour safety education course and passed an examination approved by the Department of Health. During the discussion, it was pointed out that the safety course will be set up across the state in about one year. Next, discussion was heard about the licensing procedures under LB 407 and how it applies to naturopathy, chiropractic, optometry and other forms of practice. This discussion also included explanation of various types of licenses restricted and unrestricted. The Reference Committee wishes to commend the Commission on Legislation and Governmental Affairs in their efforts to preserve proper licensure for qualified professionals. The COLA program to ensure quality laboratory work in office practice was discussed and encouraged.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

MR. SPEAKER, I MOVE THE ADOPTION OF THE REPORT OF YOUR REFERENCE COMMITTEE #5 AS A WHOLE. This was adopted by the House.

I wish at this time to thank Dr. Kenneth Bagby from Blair and Dr. Donald Fischer from North Platte for their participation in this Committee and in the preparation of this report.

Respectfully submitted,

John F. Fitzgibbons, M.D.,

Omaha - Chairman

Kenneth C. Bagby, M.D., Blair

Donald Fischer, M.D., North Platte

Reference Committee #6

Reference Committee #6 considered 6 reports and 3 resolutions. The Reference Committee submits the following report and recommendations.

(1) ITEM 2, REPORT OF BOARD OF DIRECTORS - STUDY OF UNCOMPENSATED CARE

The Board of Directors has considered the request submitted during the 1987 Annual Session regarding developing a mechanism for accumulation of data which would indicate the amount of uncompensated care that is provided by Nebraska physicians. The Board has concluded that currently no reliable information is readily available in Nebraska. Information from the American Medical Association included Report B (A/84) as developed by the Council on Medical Service. This report is entitled "Uncompensated Medical Care" and contains data that was compiled for the calendar year 1982.

Recommendation:

Acceptance of the NMA Board proposal that the Nebraska Medical Association Delegates to the AMA House of Delegates be requested to prepare a resolution which would ask for the AMA to update the report on "Uncompensated Medical Care."

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was seconded.

Dr. Cornelius indicated he had requested from the State Health Department figures on the amount of billed charges vs amount paid by the Medicaid program. These figures showed submitted bills of \$22 million with \$14 million paid for the fiscal year 1986. There were also amounts paid by other third parties which may have changed these figures somewhat.

Dr. Meissner said the Board of Directors discussed this issue and it was pointed out that there is a difference between underpaid billed services and truly uncompensated care.

Dr. Cornelius felt it important to begin to develop some information that indicates that Nebraska doctors are currently subsidizing the Medicaid program for a specified amount, and this is in addition to the uncompensated care they are providing. He moved that a second recommendation be added to this section of the report, namely that in the area of Medicaid, we make an effort to obtain information from the State of Nebraska on that program as to what the total charges are and what the total amounts paid were. This amendment was adopted by the House, and this section of the Reference Committee report was adopted as amended.

(2) ITEM 10, REPORT OF BOARD OF DIRECTORS - AIDS

The report emphasized the importance of physician awareness of current data on AIDS. There has been a recent series of monographs on the subject of AIDS that has appear in recent issues of the American Medical News. Physicians should be encouraged to be well-informed on the topic of AIDS particularly with respect to recent scientific information, and directives from the Communicable Disease Center and the AMA.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(3) ITEM 11, REPORT OF BOARD OF DIRECTORS - 1988 ANNUAL SESSION FORMAT

The Reference Committee concurred with the Board's

opinion that the changes as proposed by the Scientific Committee should be approved and implemented in the format of the 1988 Annual Session.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(4) REPORT OF COMMISSION ON PUBLIC AFFAIRS

The report submitted indicated that there has been considerable activity in promoting a positive public image of medicine in the State of Nebraska. There has been preparation and distribution on a regular monthly basis of "Health Tips". The NMA President's annual "State of the Health" is being prepared for presentation. There have been a number of new projects initiated that are intended to advance the good health habits and the attitude of wellness. The Commission on Public Affairs should be commended for their sustained efforts at enhancing the image of medicine in the State of Nebraska.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(5) REPORT OF SCIENTIFIC SESSIONS COMMITTEE

The revised format to be used for the 1988 Annual Session which will take place April 29, - May 2, 1988, at the Marriott Hotel in Omaha was reviewed. The Inaugural Banquet would be combined with the Fun Night activity and held on Saturday evening. The House of Delegates' first session would take place on Friday and the final two sessions consecutively on Sunday. Sportsman's Day would continue on Monday afternoon. There was a consensus that there should be a Monday morning program to provide an opportunity for physician fellowship. The scientific program by specialty groups would be held on Friday and Saturday.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was seconded. Dr. Larson asked if the Scientific Sessions Committee had considered using a format similar to those used for some Colorado meetings by having an early morning scientific meeting, then going skiing with another scientific meeting later in the afternoon. He moved that this type of split session be investigated for Sportsman's Day, with morning and late afternoon scientific meetings and Sportsman's Day in the middle. This was adopted by the House, and this section of the Reference Committee report was adopted as amended.

(6) RESOLUTION #3 - METRO OMAHA MEDICAL SOCIETY - COMMENDATION OF CONGRESSIONAL DELEGATION

This resolution reads as follows:

WHEREAS, the Nebraska Congressional Delegation has supported the practice of quality medicine for all Nebraskans, and

WHEREAS, the recent attempt to place radiologists, anesthesiologists, and pathologists under the hospital DRG program was vigorously opposed by the Nebraska delegation;

THEREFORE, BE IT RESOLVED, that the Nebraska Medical Association express its gratitude by letter to the members of the Nebraska Congressional Delegation.

The Nebraska Medical Association should express its

gratitude by letter to the members of the Nebraska congressional delegation for their support in vigorously, successfully opposing the RAP's and DRG program. The Reference Committee recommends approval of this resolution.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(7) RESOLUTION #4 - METRO OMAHA MEDICAL SOCIETY - NATIONAL STUDY OF RESOURCE BASED RELATIVE VALUE SCALES FOR PHYSICIANS SERVICES

This resolution reads as follows:

WHEREAS, the AMA is involved with Harvard University in evaluating a national relative value scale for reimbursement for physician services, and

WHEREAS, the study is past the technical stage and is in the consensus state, and

WHEREAS, this study may well form the basis for future compensation for physician services;

THEREFORE, BE IT RESOLVED, that the Nebraska Medical Association inform its membership of the current status of this study and how it might impact the patients and physicians of the State of Nebraska.

Discussion regarding the Harvard University National Relative Value Scale for Reimbursement of Physician Services revealed that this study is past the technical stage and is in the consensus stage. It is recognized that this may well form the basis for future physician service compensation. The resolution recommends that the NMA inform its membership of the current status of this study and how it might impact the patients and physicians of the State of Nebraska. The Reference Committee recommends approval of this resolution.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(8) RESOLUTION #9 - METRO OMAHA MEDICAL SOCIETY - AIDS

This resolution reads as follows:

WHEREAS, AIDS is the devastating disease that at this time holds little hope for its victims, and

WHEREAS, much scientific investigation is underway, and

WHEREAS, it is important that all physicians be knowledgeable about the latest findings;

THEREFORE, BE IT RESOLVED, that the Nebraska Medical Association establish a task force to be a resource for information on the subject of AIDS and to serve as a strong liaison with the Metropolitan Omaha Medical Society's AIDS Task Force and with the Health Department.

There was a consensus that the NMA develop a mechanism for timeliness in responding to questions concerning AIDS in the State of Nebraska. The Reference Committee recommends that the resolved portion of the resolution be amended to read, "RESOLVED, that the Nebraska Medical Association establish a task force of knowledgeable physicians to be a resource for information on the subject of AIDS and to serve as a strong liaison with the Metro Omaha Medical Society AIDS Task Force,

and other similar AIDS task forces and with the Nebraska Department of Health."

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

(9) REPORT OF AD-HOC COMMITTEE ON ALTERNATE HEALTH PLANS

The Ad-Hoc Committee on Alternate Health Plans has not met since the last session of the NMA. The NMA office continues to assist the membership with information in regard to specific contracts.

MR. SPEAKER, I MOVE THE ADOPTION OF THIS SECTION OF OUR REPORT. This was adopted by the House.

MR. SPEAKER, I MOVE THE ADOPTION OF THE REPORT OF YOUR REFERENCE COMMITTEE #6 AS A WHOLE AS AMENDED. This was adopted by the House.

I would like to take this opportunity to thank Dr. Michael Wilkins of Lincoln and Dr. John C. Wilcox of Aurora for their kind assistance in the preparation of this report.

Respectfully submitted,
Allen D. Dvorak, M.D.,
Omaha - Chairman
Michael Wilkins, M.D., Lincoln
John C. Wilcox, M.D., Aurora

There being no further business, the meeting was adjourned.

The review information referred to in Item 8 of Reference Committee #1 Report is as follows:

THE SUNDERBRUCH CORPORATION-NEBRASKA Volume 1 — Number 2

The Review Process — How Does It Work?

Because of many questions, we are delineating the review process that TSCN is required to follow, including the denial procedure. A flow chart of the review process is included.

The Process

The patient leaves the hospital and the medical records

department transmits services provided to the hospital billing department which in turn sends a bill to the Fiscal Intermediary (FI) for payment. The (FI) reimburses the hospital and includes this information on the Patient Billing tape which is sent to the PRO. The tape is placed on the PRO computer which selects a random sample of charts to be reviewed at each hospital. The number of charts selected is determined by the number of cases the (FI) has paid to the individual hospitals during a specific period. The tapes including the charts to be reviewed are mailed to the hospitals and TSCN.

The Review - Approval And/Or Denial

The TSCN Review Coordinator reviews charts using designated criteria. If the criteria is met, the case is approved and no further action is taken. If the criteria is not met the chart is referred to a Physician Reviewer (PR). He/she reviews the chart and either approves it or recommends a denial. If the case is denied by the first physician reviewer, a letter is sent to the physician indicating the reason for denial and offering the physician the opportunity to provide additional information on the case. Such information must be received within ten days from the date the TSCN letter was written. If no information is received, a letter of denial is sent to the physician, hospital and patient indicating that any one of the three may ask for reconsideration. If the physician provides additional information, which becomes a part of the patient record, this information is given to a second physician reviewer for consideration. If the second physician reviewer feels the additional information is acceptable, he/she can reverse the decision of the first physician reviewer and the case is approved. If the decision of the first physician reviewer is upheld, a letter of denial is mailed to all involved parties and reconsideration is available upon request.

Reconsideration

When a case goes to reconsideration, additional information must be provided in writing and made an addendum to the medical record. Two physicians not previously involved in the review are obtained to serve as the Reconsideration Committee. They are provided the complete information on each case. After completing the review the Reconsideration Committee makes a determination and all parties are notified by letter. If the denial is upheld the patient may request the matter be reviewed by an Administrative Law Judge whose decision is final.

AMA News Notes

(continued from page 13-A)

preferring that the ban be imposed on all flights in the public health interest.

Under the Senate provisions individuals could be fined up to \$1,000 if they violated the ban. They would be fined \$2,000 if convicted of tampering with smoke detectors in restrooms.

Pipe and cigar smoking have not been permitted on flights since 1983.

* * *

The AMA continues to be aggressive on a number of fronts in efforts to ensure the continuing availability of animals for biomedical research.

AMA staff and AMA state legislative personnel have met with representatives from the National Association of Biomedical Research (NABR) to explore the development of an AMA/NABR Animal Research Network, which will facilitate the exchange of information between national, state and local medical societies, and other concerned organizations and institutions.

Contacts with basic science professional organizations are being organized through the AMA's Division of Basic Science; the patient advocate group, Incurably Ill for Animal Research (IIAR), which was instrumental in helping defeat restrictive animal legislation in Florida, Arizona and California, continues to be assisted by the AMA; and a program on the controversy surrounding the use of animals in biomedical research will be presented at the February, 1988 AMA National Leadership Conference.

In general, these efforts are directed toward involving physicians and other scientists in a proactive, rather than reactive, stance in order to better meet the threat posed to biomedical research by animal rights extremists.

* * *

A constitutional initiative in Washington State that dealt with mandatory acceptance of Medicare assignment for physicians was soundly rejected on November 3. The initia-

tive would have made it a violation of the state's Consumer Protection Act if a physician did not accept Medicare assignment as payment in full. The question raised on the ballot was "Shall it be a consumer protection violation for doctors treating Medicare eligible patients to charge more than Medicare's reasonable charges?" With 90% of the precincts reporting, the vote was 339,387 opposed and 183,822 in favor.

The Washington State Medical Association waged an extremely effective campaign against this initiative over the past year. It worked with many different groups, including senior citizen and labor organizations.

* * *

Nine national medical specialties have applied for a seat in AMA's House of Delegates under newly established criteria.

These are the applicants:

- American College of Angiology
- American College of Utilization Review Physicians
- American Rheumatism Association
- American Society for Surgery of the Hand
- Association of University Radiologists
- American Association of Electromyograph and Electrodiagnosis
- American Society for Dermatologic Surgery, Inc.
- American Society of Clinical Oncology
- American Society of Maxillofacial Surgeons

The House will consider their applications at AMA's 1987 Interim Meeting in Atlanta. Currently 69 national medical specialty societies occupy seats in the House.

The House also will consider a Board of Trustees recommendation that the American Medical Peer Review Association be given observer status. Five national organizations currently enjoy that status. They are the American Dental Association, the American Hospital Association, the American Medical Care Review Association, the American Medical Women's Association and the National Medical Association.

The Nebraska Medical Journal



Volume 72
January 1987 — December 1987

ALAN D. FORKER, M.D.

Editor

WILLAM L. SCHELLPEPER

Business Manager

NORFOLK PRtg. CO., NORFOLK, NEBR.

Index to Volume 72

ORIGINAL ARTICLES

A

- Aneurysm, Ruptured Abdominal Aortic 185
Antidepressants, Tricyclic 220
Artificial Tanning 303

B

- Biography: Louis J. Gogela, M.D. 194
Biopsy 327
Biopsy of Mammographically Suspicious
Breast Lesions 14
Bumming It Over Christmas 282

C

- Careers, Health: Should Your Children
Seek to Become Physicians? 112
Clinical Case Conference 344
Coagulase-Negative Staphylococcal Bacteremia
in Neonates 277
Cocaine Epidemic 4
Cough Induced Avulsion of the Lesser Trochanter ... 280
Cranial CT Atrophy in Multiple Sclerosis 310
Cranial CT, Low-Density in Multiple Sclerosis 315

D

- Diabetic Retinopathy 80
Drug Holiday 149

E

- Eye, Retained Grass Seed 86
Exposure to Chemicals Used in Agriculture 215
Electroconvulsive Therapy 275

F

- Fruits, Nuts and Centimeters 196
Fusarium Moniliforme Pneumonia 6

H

- Hemorrhoids 190
Hydatid Disease in Saudi Arabia 306

I

- Infant Feeding Recommendations 168
Insanity 109

J

- Johnson Foundation News 294

L

- Leukopenia, Transient 83

M

- Management of the Sexual Assault Victim 401
Maternal Mortality Review 38
Medicine in Nebraska 339

O

- Operations for Variceal Hemorrhage 74
Osteomyelitis 154

P

- Paget's Disease of the Male Breast 10
Perinatal Management 102
Physical Fitness 31

R

- Radiotherapy, Biliary Tract Neoplasms 367

S

- Serum Lithium Levels 224
Stromal Tumors, Gastric 336
Surgery, Wordy 317

T

- Transcatheter Closure of Patent Ductus
Arteriosus 28

U

- Urinary Tract Calculi in Pregnancy 40

V

- Ventilation in Neonatal Pulmonary
Interstitial Emphysema 362

W

- Weight Loss Results 163

FEATURES

- Auxiliary (The) 20, 66, 94, 120, 178, 232, 291,
321, 356, 378, 412
Coming Meetings 21, 69, 96, 123, 182, 207,
236, 297, 324, 357, 381, 415
In Memoriam 21, 68, 122, 181, 240, 296, 414
Letter to the Editor 121, 179
Medical School News 19, 121, 206, 234, 293, 379
Picture Gallery 211, 272, 383
President's Page 18, 65, 93, 119, 177, 203,
231, 290, 319, 354, 376, 409
Program, 119th Annual Session 127
Report, Board of Councilors 256, 433
Report, House of Delegates 256, 433
Report, Officers, Delegates and Commissions 241, 417
Welcome New Members, 68, 122, 180, 235, 296, 414

ABSTRACTS

- Cancer and Smoking-Related Diseases 52

CASE OF THE MONTH

- Newborn with Macrocephaly 406

EDITORIALS

- AMA Membership - You Owe It to Yourself 1
Artificial Intelligence and Medical
Decision Making 147
By Way of Introduction 397
Computer in the Office 25
Cranial Magnetic Resonance Imaging and
Multiple Sclerosis Lesions 101
Keeper of the King's Rectum 73
Time to Change 361
Why Are You in My Room? 301

FRACTURE OF THE MONTH

- Avulsion Fracture of the Patella 373
Fracture Dislocation from a "Jammed Finger" 226
Growth Arrest, Displaced Distal
Femoral Epiphyseal Fracture 341
Recurrent Wrist "Sprain" 198

HISTORY OF MEDICINE

UNMC Department of Pathology & Microbiology ... 42

LETTER TO THE EDITOR

Erroneous Elevation of Creatinine Caused
by 5-fluorocytosine. 289

PERINATAL PAGE

Alternative Birth Centers. 286
Cesarean Section and the Small Fetus 88
Neonatal Jaundice 16

Obstetrical Ultrasound 201
Ultrasound Assessment. 115
Use of Rh-Immune Globulin. 175
Why Blame the Obstetrician? 229

SOCIOECONOMIC AND POLITICAL FORUM

The Scope of Nursing Practice 398

X-RAY OF THE MONTH

Arteriovenous Malformation of the Brain. 404
Rupture of the Thoracic Aorta 117
Teratoma. 284

AUTHORS

A

Aita, John F. 101, 310, 315
Allen, Debbie K. 215
Auerbach, Kathleen G. 168

B

Barton, Charles L. 398
Basler, Rodney, S.W. 303
Beck, Leif C. 112
Bever, John L. 6
Bleicher, Joel N. 83
Bolam, David L. 16, 362
Breiner, Michael A. 185
Buchanan, J. H. 327
Buckley, John F. 10
Buchman, Robert J. 185

C

Campbell, J. Kemper 86
Carveth, Stephen W. 185
Cegielski, Mieczyslaw. 163
Cheatham, John P. 28
Clark, Richard B. 277
Connolly, John F. 198, 226
341, 373
Cormier, Robert A. 74
Crosby, Lynn A. 373

D

Davidian, Michael H. 80
Davis, Jan 226
Decker, D. A., Jr. 25, 147
Dehning, Michael M. 31
Del Monte, William R. 80
Dinghra, Upma. 109
Durfee, Donna. 83

E

Eggert, Joan V. 102
Eggert, Larry D. 102, 362

F

Fagnant, Robert J. 401

G

Gelber, Benjamin R. 397

L

Latson, Larry A. 28
Lavery, J. Patrick. 115, 175,
201, 229
Lim, Thomas P. K. 31
Lorkovic, Margaret 286
Lydiatt, Daniel D. 154

M

Mailliard, James A. 280
Mathews, Wayne 224
McGahan, Michael J. 336
McWhorter, C.A. 42
Monif, Gilles R. G. 401
Monsour, Howard P. 289, 344
Moore, Gerald. 344
Murrin, L. Charles 149
Musto, David F. 4

N

Nelson, Lyle W. 154
Nelson, Robert M. 16, 362
Newland, J. R. 42
Norman, Thomas C. 224

O

O'Holleran, John D. 14
O'Holleran, Timothy P. 14
O'Sullivan, James 220
Owen, D. R. 367

P

Patterson, Kerry B. 10
Paulman, Paul M. 40
Penn, Robert G. 6
Perelman, Harry. 196, 317
Pfeiffer, Ronald F. 149
Phalen, James J. ... 117, 284, 404
Policastro, Anthony J. 83
Priluck, Ira A. 80

R

Rayburn, William. 286
Reese, Herbert E. 185
Rettig, Bryan A. 215
Rikkers, Layton F. 74
Robertson, T. Scot 344
Rothberg, Martin L. 339
Rumbolz, William L. 38
Russell, Gayle A. 401

S

Saporta, Jose A. Sr. 163
Schenken, Jerald R. 1
Schima, Edward J. 404
Sedlacek, Michael J. 275
Sharma, Arun. 220
Shindell, R. 341
Silenieks, Aina I. 336
Smith, Philip. 289
Smith, Samuel E. 198
Sniezek, Joseph E. 215
Stanislav, Gregory V. 339
Stavas, Joe 406

T

Tollman, J. P. 42
Tomek, Charles S. 10
Trimble, Kara A. 277
Tusek, Zdenek A. 306

W

Walburn, John 168
Windle, Richard J. 336
Wood, Brian R. 362
Woytassek, Leonard E. 109
Wszolek, Zbigniew 289, 404

Y

Yohe, Charles D. 224

Z

Zach, Terence L. 6

AMA News Notes

HCFA has instructed Medicare carriers to release notices of potential MAAC violations to individual physicians. Nationwide, approximately 5% of non-participating physicians will be issued notices of potential MAAC violations. Letters may be delayed in a handful of states pending HCFA review of the implementation of monitoring instructions by local Medicare carriers. In these states, the number of potential violations is significantly higher than the national average.

HCFA has raised the cumulative threshold from \$500 to \$700. In cases where MAACs have been adjusted due to calculation errors, the carriers are to only monitor charges after the date of the corrected MAAC. Due to this

year's delay in implementing MAAC monitoring, except for extreme cases, a physician will not be referred to the Inspector General if his or her charge is reduced to or below the MAAC limit for the remainder of the year.

Physicians who receive notices of potential MAAC violations should immediately respond, in writing, to their local carriers and provide documentation if the MAAC calculations are in dispute.

Based on a better understanding of the MAAC program by both carriers and physicians, current indications are that stricter monitoring standards will be applied next year.



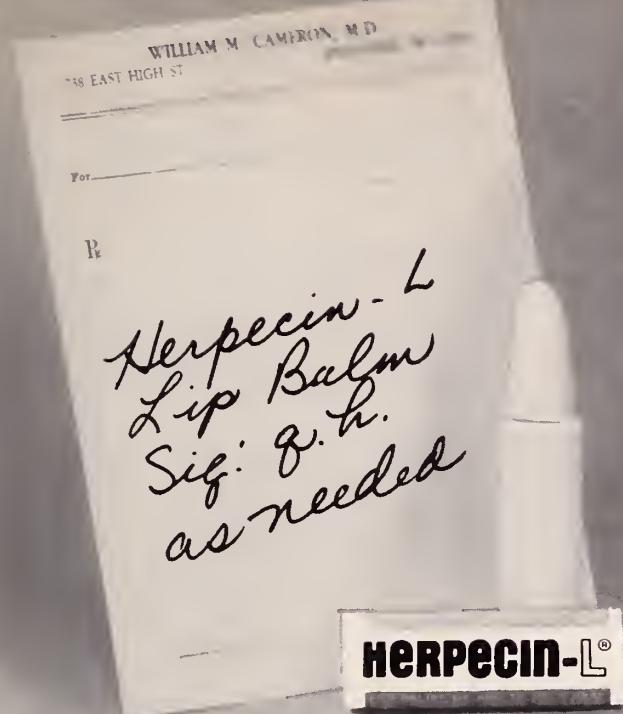
NEBRASKA MEDICAL ASSOCIATION

118th Annual Session

April 29 — May 2, 1988

OMAHA MARRIOTT HOTEL Omaha, Nebraska

Dx: recurrent herpes labialis



"HERPECIN-L is my treatment of choice for perioral herpes." GP, NY

"HERPECIN-L appears to actually prevent the blisters . . . used soon enough." DDS, MN

"HERPECIN-L . . . a conservative approach with low risk/high benefits." MD, FL

"Used at prodromal symptoms . . . blisters never formed . . . remarkable." DH, MA

"(In clinical trials) . . . response was dramatic. HERPECIN-L . . . proven far superior." DDS, PA

"All patients claimed shorter duration . . . at prodromal symptoms . . . HERPECIN-L averted the attacks." MD, AK

OTC. See P.D.R. for information. For samples to make your own clinical evaluation, write: CAMPBELL LABORATORIES, Inc., P.O. BOX 812-MD, FDR STATION, NEW YORK, N.Y. 10150

In Nebraska HERPECIN-L is available at all *Keystone, Osco and Walgreens* and other select pharmacies.

ADVERTISER'S INDEX

B	
Burroughs Wellcome Co.	9, 10, 11
C	
Campbell Laboratories	15
D	
Deaconess Medical Center	15
Donley Medical Supply	6
F	
Family Practice Recertification	3
I	
Info-Builders, Inc.	13
L	
Eli Lilly & Company	8
M	
Medical Protective Co.	13
N	
Nebraska Beef Board	2
Norfolk Printing Co., Inc.	6
R	
Roche Laboratories	19, 20
S	
Smith Kline & French Labs	7
U	
U.S. Air Force	14
U.S. Army	12

LOCUM TENENS PHYSICIANS

Join a comprehensive physician support service with a major medical center in south central Montana.

Locum physicians provide primary care coverage (excl. routine OB) for physicians in rural Montana and Wyoming. Assignments vary in length. Reimbursement for expenses, malpractice, health insurance, CME.

Call Locum Tenens Coordinator
1-800-325-1774

Or send CV:
1500 Poly Drive, Suite 103
Billings, MT 59102

Nebraska Medical Association Officers and Commissions

OFFICERS

L. Dwight Cherry, M.D., Lincoln	President
C. A. McWhorter, M.D., Omaha	President-Elect
Robert F. Shapiro, M.D., Lincoln	Secretary-Treasurer
William L. Schellpeper, Lincoln	Executive Director
James K. Ruigh, Lincoln	Assistant Executive Director

AMA Delegates — C. J. Cornelius, Jr., M.D., Sidney;
John D. Coe, M.D., Omaha; Louis J. Gogela, M.D.,
Lincoln; Blaine Y. Roffman, M.D., Omaha.

BOARD OF DIRECTORS

L. Dwight Cherry, M.D., Kearney	Chairman
C. A. McWhorter, M.D., Omaha	Vice-Chairman
Robert F. Shapiro, M.D., Lincoln	Secretary-Treasurer
Hiram B. Walker, M.D., Kearney	Past President
Paul E. Collicott, M.D.	Lincoln
Richard A. Raymond, M.D.	O'Neill
Donald J. Pavelka, M.D.	Omaha
Richard H. Meissner, M.D.	Omaha
Harry R. McFadden, M.D., ProTem.	Omaha
C. T. Frerichs, M.D.	Beatrice

COMMISSION ON ASSOCIATION AFFAIRS

Harry W. McFadden, M.D., Chairman	Omaha
R. A. Blatny, M.D.	Fairbury
Stuart P. Embury, M.D.	Holdrege
Joel T. Johnson, M.D.	Kearney
Bernard L. Kratochvil, M.D.	Omaha
Walter O'Donohue, M.D.	Omaha
Herbert E. Reese, M.D.	Lincoln
Joseph E. Stichter, M.D.	Lincoln
R. C. Weldon, M.D.	Nebraska City

SCIENTIFIC SESSIONS COMMITTEE

Sushil S. Lacy, M.D., Chairman	Lincoln
Mark A. Christensen, M.D., Convention Chairman	Omaha
David L. Bacon, M.D.	Kearney
Robert A. Beer, M.D.	Omaha
Mark A. Christensen, M.D.	Omaha
Richard A. Hranac, M.D.	Kearney
Donald J. Larson, M.D.	Lincoln
Richard M. Tempero, M.D.	Omaha
Donald E. Waltemath, M.D.	Lincoln
Rick J. Windle, M.D.	Lincoln
Richard S. Yates, M.D.	Lincoln
Eugene M. Zweiback, M.D.	Omaha

COMMISSION ON MEDICAL SERVICES

William L. Rumbolz, M.D., Chairman	Omaha
Carl J. Cornelius, Jr., M.D.	Sidney
Richard A. Hranac, M.D.	Kearney
F. William Karrer, M.D.	Omaha
Dale E. Michels, M.D.	Lincoln
Merton Quaife, M.D.	Omaha
Kenton L. Shaffer, M.D.	Kearney

AD-HOC COMMITTEE ON MATERNAL & CHILD HEALTH

Kenton L. Shaffer, M.D., Chairman	Kearney
Section on Maternal Mortality Review	
George M. Adam, M.D.	Hastings
James G. Cummins, M.D.	Omaha
L. Palmer Johnson, M.D.	Lincoln
Gary D. Milius, M.D.	Lincoln
William F. Rayburn, M.D.	Omaha
William L. Rumbolz, M.D.	Omaha
Larry Wilson, M.D.	Gothenburg
Section on Perinatal Mortality Review	
Lawrence C. Bausch, M.D.	Lincoln
Stacie R. Bleicher, M.D.	Lincoln
Robert M. Nelson, M.D.	Omaha
Gregg F. Wright, M.D.	Lincoln

AD-HOC COMMITTEE ON GERIATRICS

Richard A. Hranac, M.D., Chairman	Kearney
Ronald L. Asher, M.D.	North Platte
James Carraher, M.D.	Lincoln
J. Whitney Kelley, M.D.	Omaha
Jane F. Potter, M.D.	Omaha
Richard Thompson, M.D.	Lincoln
John A. Ursick, M.D.	Omaha
Vernon G. Ward, M.D.	Omaha

AD-HOC COMMITTEE ON ALTERNATE HEALTH PLANS

Dale E. Michels, M.D., Chairman	Lincoln
Lonnie S. Albers, M.D.	Lincoln
Vernon F. Garwood, M.D.	Lincoln
Robert L. Haag, M.D.	Lincoln
Michael J. Haller, M.D.	Omaha

Roger D. Mason, M.D.	Omaha
Margaret A. Moravec, M.D.	Lincoln
Richard H. Meissner, M.D.	Omaha
Dwaine J. Peetz, Jr., M.D.	Omaha
Layton F. Rikkers, M.D.	Omaha
Sebastian J. Troia, M.D.	Omaha

COMMITTEE ON HEALTH PLANNING

Carl J. Cornelius, Jr., M.D., Chairman	Sidney
Gordon D. Adams, M.D.	Norfolk
Lewiston W. Birkmann, M.D.	Lincoln
James S. Carson, M.D.	McCook
Chris C. Caudill, M.D.	Lincoln
Allen D. Dvorak, M.D.	Omaha
Dale W. Ebers, M.D.	Lincoln
Louis J. Gogela, Jr., M.D.	Beatrice
Roger D. Mason, M.D.	Omaha
Donald F. Prince, M.D.	Minden
C. Lee Retelsdorf, M.D.	Omaha
Thomas H. Wallace, M.D.	Gordon

AD-HOC COMMITTEE ON TUMOR REGISTRY

F. William Karrer, M.D., Chairman	Omaha
Elvin G. Brown, M.D.	Hastings
John H. Casey, M.D.	Lincoln
James R. Commers, M.D.	Omaha
Sushil S. Lacy, M.D.	Lincoln
Donald R. Owen, M.D.	Omaha
C. Lee Retelsdorf, M.D.	Omaha
Ron D. Scott, M.D.	Kearney

AD-HOC COMMITTEE ON LOW LEVEL RADIATION WASTE DISPOSAL

Merton A. Quaife, M.D., Chairman	Omaha
Prentiss M. Dettman, M.D.	Lincoln
Allen D. Dvorak, M.D.	Omaha
David J. Hoelting, M.D.	Pender
Ernest O. Jones, Ph.D.	Omaha
Martin R. Lohff, M.D.	Omaha
W. E. Lundak, M.D.	Lincoln
William H. Northwall, M.D.	Kearney
Jerald R. Schenken, M.D.	Omaha

COMMISSION ON LEGISLATION AND GOVERNMENTAL AFFAIRS

Ronald L. Klutman, M.D., Chairman	Columbus
Robert G. Osborne, M.D., Vice-Chairman	Lincoln
Rodney S. W. Basler, M.D.	Lincoln
James H. Dunlap, M.D.	Norfolk
Dale W. Ebers, M.D.	Lincoln
Richard D. Fitch, M.D.	O'Neill
Vernon F. Garwood, M.D.	Lincoln
Charles Gregorius, M.D.	Lincoln
Bruce W. Henricks, M.D.	Freemont
Barbara M. Heywood, M.D.	Papillion
Mark R. Hutchins, M.D.	Lincoln
Max W. Linder, M.D.	Lincoln
Ann E. Lott, M.D.	Lincoln
William R. Marsh, M.D.	Grand Island
John T. McGreer, III, M.D.	Lincoln
Dennis G. O'Leary, M.D.	Omaha
George W. Orr, M.D.	Omaha
Dwaine J. Peetz, M.D.	Neligh
Herbert E. Reese, M.D.	Lincoln
C. Lee Retelsdorf, M.D.	Omaha
Blaine Y. Roffman, M.D.	Omaha
Jerald R. Schenken, M.D.	Omaha
Todd S. Sorensen, M.D.	Scottsbluff
Richard B. Svehla, M.D.	Omaha
Timothy O. Wahl, M.D.	Omaha

AD-HOC COMMITTEE ON HEALTH POLICY STATEMENTS

C. Lee Retelsdorf, M.D., Chairman	Omaha
Daniel S. Durrie, M.D.	Omaha
Joel T. Johnson, M.D.	Kearney
Darroll J. Loschen, M.D.	York
Dale E. Michels, M.D.	Lincoln
Stanley F. Nabity, M.D.	Grand Island
John F. Porterfield, M.D.	Lincoln
Gerald Rounsberg, M.D.	North Platte
Charles S. Wilson, M.D.	Lincoln

AD-HOC COMMITTEE ON PROFESSIONAL LIABILITY

James H. Dunlap, M.D., Chairman	Norfolk
David L. Bacon, M.D.	Kearney
Warren G. Bosley, M.D.	Grand Island
Ernest W. Chupp, M.D.	Omaha
F. M. Gawecki, M.D.	Papillion
Dwayne J. Peetz, M.D.	Neligh
Richard M. Pitsch, Jr., M.D.	Lincoln
Herbert E. Reese, M.D.	Lincoln
Blaine Y. Roffman, M.D.	Omaha

COMMISSION ON MEDICAL EDUCATION

Frederick F. Paustian, M.D., Chairman	Omaha
Robert L. Bass, M.D.	Elkhorn
Warren G. Bosley, M.D.	Grand Island
Patrick E. Brookhouser, M.D.	Omaha
Charles F. Damico, M.D.	Hastings
Charles A. Dobry, M.D.	Omaha
A. Dean Gilg, M.D.	Lincoln
William E. Lundak, M.D.	Lincoln
Richard L. O'Brien, M.D.	Omaha
Dwayne J. Peetz, Jr., M.D.	Omaha
Joseph C. Scott, M.D.	Omaha
Robert H. Waldman, M.D.	Omaha

AD-HOC COMMITTEE ON HEALTH EDUCATION & ATHLETIC MEDICINE

Warren G. Bosley, M.D., Chairman	Grand Island
Patrick E. Clare, M.D., Vice-Chairman	Lincoln
Joseph R. Ellison, M.D.	Omaha
Richard W. Hammer, M.D.	Lincoln
Richard E. Jackson, M.D.	Pawnee City
Stephen J. Lanspa, M.D.	Omaha
Morris B. Mellon, M.D.	Omaha
Paul H. Phillips, M.D.	Scottsbluff
Richard A. Raymond, M.D.	O'Neill
Eileen C. Vautravers, M.D.	Lincoln
Hobart E. Wallace, M.D.	Lincoln
Wesley G. Wilhelm, M.D.	Omaha
Gregg F. Wright, M.D.	Lincoln

COMMISSION ON PUBLIC AFFAIRS

Rodney S. W. Basler, M.D., Chairman	Lincoln
H. Jeffrey Deeths, M.D.	Omaha
Herbert D. Feidler, M.D.	Norfolk
Edward E. Gatz, M.D.	Omaha
Donald T. Glow, M.D.	Omaha
John J. Hoelsing, M.D.	Omaha
Roger P. Massie, M.D.	Plainview
Donald E. Matthews, M.D.	Lincoln
Harlan C. Shriner, M.D.	Lincoln
F. Thomas Waring, M.D.	Fremont

COMMISSION ON HOSPITAL MEDICAL STAFF

Glen F. Lau, M.D., Chairman	Lincoln
Charles Heider, Jr., M.D.	North Platte
Harry E. Keig, M.D.	Papillion
Barney B. Rees, M.D.	Omaha
Joseph G. Rogers, M.D.	Lincoln
Larry D. Ruth, M.D.	Lincoln
Steven A. Schwid, M.D.	Omaha
Jerry K. Seiler, M.D.	Hastings
William A. Shiffermiller, M.D.	Omaha
Stephen D. Torpy, M.D.	Omaha

AD-HOC COMMITTEE ON HEALTH GALLERY

Russell L. Gorthey, M.D., Chairman	Lincoln
Warren G. Bosley, M.D.	Grand Island
Glen F. Lau, M.D.	Lincoln
Richard C. Olney, M.D.	Lincoln
John L. Reed, M.D.	Lincoln
Stanley M. Truhlsen, M.D.	Omaha

AD-HOC COMMITTEE ON YOUNG PHYSICIANS

Richard A. Raymond, M.D., Chairman	O'Neill
Gary W. Barth, M.D.	Hastings
John I. Cherry, M.D.	Lincoln
Norman Grosbach, M.D.	Omaha
Herbert A. Hartman, Jr., M.D.	Omaha
Katherine A. Keifer, M.D.	Kearney
Jeanette L. Masek, M.D.	Lincoln
Kirk B. Muffy, M.D.	Omaha
Timothy P. O'Holleran, M.D.	North Platte
Mark D. Pilley, M.D.	Omaha
Bradley D. Rodgers, M.D.	Holdrege
William A. Shiffermiller, M.D.	Omaha
Vincent J. Sutton, M.D.	Hastings

NMA PRO OVERVIEW COMMITTEE

M. Jack Mathews, M.D., Chairman	Lincoln
David Bacon, M.D.	Kearney
Steven T. Bailey, M.D.	Omaha
A. H. Bergman, M.D.	Fremont

Dennis M. Connolly, M.D.	Lincoln
Carl J. Cornelius, Jr., M.D.	Sidney
Richard A. Cottingham, M.D.	McCook
Francis D. Donahue, M.D.	Omaha
Daniel S. Durrie, M.D.	Omaha
John F. Fitzgibbons, M.D.	Omaha
C. T. Frerichs, M.D.	Beatrice
Gordon J. Hrnicek, M.D.	Grand Island
Frederick F. Paustian, M.D.	Omaha
Richard A. Raymond, M.D.	O'Neill
Herbert E. Reese, M.D.	Lincoln

AD-HOC COMMITTEE RE: BLUE SHIELD OF IOWA-MEDICARE

Paul E. Collicott, M.D., Chairman	Lincoln
R. A. Blatny, M.D.	Fairbury
Steve Brase	Lincoln
Thomas M. Connors, M.D.	Omaha
Bob Gallion	Lincoln
Vernon Garwood, M.D.	Lincoln
Roger Massie, M.D.	Plainview
Mrs. Janice Olson	Lincoln
Donald Pavelka, M.D.	Omaha
Richard B. Svehla, M.D.	Omaha
Hiram R. Walker, M.D.	Kearney

AD-HOC COMMITTEE ON MEDICAID SERVICES

Chris C. Caudill, M.D., Chairman	Lincoln
Judith A. Butler, M.D.	Superior
Dale W. Ebers, M.D.	Lincoln
Russell L. Gorthey, M.D.	Lincoln
Roger A. Jacobs, M.D.	Seward
Ronald Klutman, M.D.	Columbus
Harold M. Nordlund, M.D.	York
Richard B. Svehla, M.D.	Omaha
M. Allen Tompkins, M.D.	Grand Island

NMA TASK FORCE ON AIDS

Monte M. Scott, M.D., Chairman	Lincoln
Samuel E. Boon, M.D.	Lincoln
Robert C. Rosenlof, M.D.	Kearney
Philip W. Smith, M.D.	Omaha
Scot C. Sorensen, M.D.	Lincoln

Drug/Alcohol/Emotional/Other Health Problems

HELP IS AVAILABLE
FOR YOU

FOR A MEMBER OF YOUR FAMILY
FOR A PROFESSIONAL, FRIEND OR
COLLEAGUE

Call
The Physician's Advocacy Committee
(Nebraska Medical Association)
Strictly Confidential — Professional — Effective

For information call:

402-393-3216

(You do not have to give your name.)

Physicians' Classified

Advertisements in this column are run at the rate of \$15.00 per insertion, for an advertisement of 50 words or less. An additional charge of 25¢ per word will be assessed for advertisements exceeding the 50-word limit. Copy must be received by the fifth of the month preceding the date of publication. Each advertisement will be removed following its first appearance unless otherwise instructed. If desired, advertisers may utilize a box number in care of THE NEBRASKA MEDICAL JOURNAL, 1512 FirstTier Bank Bldg., Lincoln, NE 68508.

INTERNIST BC/BE: With or without subspecialty to join 5 physician single specialty group practice in S.W. Missouri, serving population of 1 million plus. Excellent opportunity, competitive salary guaranteed, incentive bonus. Malpractice and excellent benefits paid; opportunity for ownership. Pleasant recreational environment in the Ozarks. Call or mail CV to Adm., The Diagnostic Clinic, 3443 S. National, Springfield, MO 65807, (417)883-3443.

EMERGENCY MEDICINE: For Emergency Physician who possesses excellent clinical and trauma skills within a group of 7 Emergency Room Physicians located in beautiful northwest Wisconsin area. Please send C.V. to Dr. M. Jaghlit, 900 W. Clairemont Ave., Eau Claire, WI 54701, or call (715)839-4404.

AVAILABLE: Practice opportunity for family practice. Board certified desired. Grand Island, NE. Please reply to Box 030, **Nebraska Medical Journal**, 1512 FirstTier Bank Bldg., Lincoln, NE 68508.

PHYSICIAN OPPORTUNITY: PHP Healthcare Corporation, a leader in healthcare management services, has projected a need for physicians to staff primary care clinics located in several locations throughout the United States including Omaha, Nebraska. Qualifications are: board certification or eligibility, a license in the particular state they would be located, and a minimum of 1 year experience. Preference given to those candidates in Family Practice, Pediatrics, Internal Medicine, or Emergency Medicine. Our company offers an outstanding incentive pay plan with the opportunity to earn \$90,000+ annually. PHP also provides paid malpractice insurance and a pleasant work environment. We would be pleased to discuss potential positions and site descriptions with you. If interested and qualified, please call or send C.V. to Leigh Robbins, 125 Belle Forest Circle, Suite 200, Nashville, TN 37221, 615/662-1310.

DERMATOLOGIST, PEDIATRICIAN, ONCOLOGIST, PATHOLOGIST, OTORHINOLARYNGOLOGIST, PSYCHIATRIST, ENDOCRINOLOGIST, ORTHOPEDIST, GENERAL/FAMILY PRACTITIONER: Excellent opportunity for physicians in Los Angeles suburb to join 90-member multi-specialty medical group. Large fee-for-service and prepaid practice, no Medi-Cal. Excellent compensation program based on guarantee plus incentive, profit sharing and pension plan. Group provides health, dental, life and malpractice. Partnership in real estate and medical corporation available. Send CV to Ron McDaniel, Assistant Administrator, Mullikin Medical Center, 17821 S. Pioneer Blvd., Artesia, CA 90701.

AVAILABLE: Excellent opportunity for Family Practitioner to locate in thriving 3-man practice in rural Nebraska. Progressive community with well-equipped hospital. Good recreation. Attractive financial arrangements available. For details write Box 031, **Nebraska Medical Journal**, 1512 FirstTier Bank Bldg., Lincoln, NE 68508.

PROGRAM DIRECTOR: The Lincoln Medical Education Foundation of Lincoln, NE, is recruiting a Program Director for a community-based Family Practice Residency Program affiliated with the University of Nebraska Medical Center. This fully-accredited and established program, approved for eighteen positions, offers a unique opportunity to participate with a coalition of hospitals and physicians interested in training family physicians for rural areas. ABFP, medical practice and teaching experience required. Send letter of interest and curriculum vitae to: Chairman, Search Committee, Lincoln Medical Education Foundation, 4600 Valley Road, Lincoln, NE 68510.

NEUROLOGIST: Experienced Neurologist needed to join expanding 85-physician multi-specialty medical center, in Los Angeles and Orange counties, with existing Neurological practice. An exceptional base salary and incentive plan. Benefits include malpractice insurance, group health and life insurance. Please send CV to Box 033, **Nebraska Medical Journal**, 1512 FirstTier Bank Bldg., Lincoln, NE 68508.

FAMILY PHYSICIAN: Rushville, Nebraska, a rural community in Northwest Nebraska is seeking a physician immediately. Recreation includes hunting, fishing, snow skiing nearby, tennis, civic organizations, swimming. We have an excellent school system. For more information contact Barb Dreyer, Box 129, Rushville, NE 69360, or call (308) 327-2248.

GENERAL SURGEON: Board Certified General Surgeon needed to join expanding 85-physician multi-specialty medical center, in Los Angeles and Orange counties. An exceptional base salary and incentive plan. Benefits include malpractice insurance, group health and life insurance. Please send CV to Box 032, **Nebraska Medical Journal**, 1512 FirstTier Bank Bldg., Lincoln, NE 68508.

FAMILY PHYSICIAN NEEDED: Immediate need for BC/BE Family Physician to join 2 established Family Physicians in private practice in N.W. Iowa community of 5,000. Modern Clinic across the street from JCAH hospital. Excellent salary and fringe benefits with partnership opportunity. Locum tenens opportunity available also. Call collect (712)324-2511 or contact Sheldon Family Practice Associates, 206 N. 7th Ave., Sheldon, IA 51201.

\$145,000 INCOME: Family Practice group aggressively seeking fourth physician for their group. Contact Wiltfang-Paulson Clinic, 1129 Spencer Street, Grinnell, Iowa 50112. Phone: 515-236-3163.

In acute and chronic edema due to CHF

FOR PREDICTABLE CONTROL

- **Less potassium loss for a given amount of sodium excretion than with furosemide¹⁻³**
- **Predictable dose response⁴**
- **Diuresis completed hours faster than with furosemide after oral dosing⁵**
- **Better GI absorption^{6,7}**
- **Early evening dosing helps prevent nocturnal dyspnea**

As with all loop diuretics, excessive doses of BUMEX can lead to profound diuresis with water and electrolyte depletion, including hypokalemia, so serum electrolytes should be monitored.



Bumex[®]

bumetanide/Roche

0.5-mg, 1-mg and 2-mg scored tablets; 2-ml ampuls and 2-ml, 4-ml and 10-ml vials (0.25 mg/ml)

References: 1. Flomenbaum W. *Am J Cardiol* 57(2): 38A-43A, 1986. 2. Brater DC, Fox WR, Chennavasin P. *J Clin Pharmacol* 21: 599-603, 1981. 3. Iber FL, Baum RA. *J Clin Pharmacol* 21: 697-700, 1981. 4. Henning R, Lundvall O. *Eur J Clin Pharmacol* 6: 224-227, 1973. 5. Physicians' Desk Reference, 40th ed. Oradell, NJ, Medical Economics Company, 1986, pp. 939, 1480. 6. Pentikainen PJ, et al. *Br J Clin Pharmacol* 4: 39-44, 1977. 7. Losix, A Review. Somerville, NJ, Hoechst-Roussel Pharmaceuticals, Inc., 1980.

BUMEX[®]
(bumetanide/Roche)
D. 5-mg, 1-mg and 2-mg scored tablets
2-ml ampuls, 2-ml, 4-ml and
10-ml vials (0.25 mg/ml)
Before prescribing, please consult complete product information, a summary of which follows:

WARNING: Bumex (bumetanide/Roche) is a potent diuretic which, if given in excessive amounts, can lead to a profound diuresis with water and electrolyte depletion. Therefore, careful medical supervision is required, and dose and dosage schedule have to be adjusted to the individual patient's needs. (See under DOSAGE AND ADMINISTRATION in complete product information.)

INDICATIONS AND USAGE: Edema associated with congestive heart failure, hepatic and renal disease, including the nephrotic syndrome.

Almost equal diuretic response occurs after oral and parenteral administration of Bumex. If impaired gastrointestinal absorption is suspected or oral administration is not practical, Bumex should be given by the intramuscular or intravenous route.

Successful treatment with Bumex following instances of allergic reactions to furosemide suggests a lack of cross-sensitivity.

CONTRAINDICATIONS: Anuria. Hypersensitivity and in patients in hepatic coma or in states of severe electrolyte depletion. Although Bumex can be used to induce diuresis in renal insufficiency, any marked increase in blood urea nitrogen or creatinine, or the development of oliguria during therapy of patients with progressive renal disease, is an indication for discontinuation of treatment.

WARNINGS: Dose should be adjusted to patient's needs. Excessive doses or too frequent administration can lead to profound water loss, electrolyte depletion, dehydration, reduction in blood volume and circulatory collapse with the possibility of vascular thrombosis and embolism, particularly in elderly patients.

Prevention of hypokalemia requires particular attention in patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis and ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, certain diarrheal states, or other states where hypokalemia is thought to represent particular added risk to the patients.

In patients with hepatic cirrhosis and ascites, sudden alterations of electrolyte balance may precipitate hepatic encephalopathy and coma. Treatment in such patients is best initiated in the hospital with small doses and careful monitoring of the patient's clinical status and electrolyte balance. Supplemental potassium and/or spironolactone may prevent hypokalemia and metabolic alkalosis in these patients. In cats, dogs and guinea pigs, Bumex has been shown to produce ototoxicity. Since Bumex is about 40 to 60 times as potent as furosemide, it is anticipated that blood levels necessary to produce ototoxicity will rarely be achieved. The potential for ototoxicity increases with intravenous therapy, especially at high doses.

Patients allergic to sulfonamides may show hypersensitivity to Bumex.

PRECAUTIONS: Measure serum potassium periodically and add potassium supplements or potassium-sparing diuretics, if necessary. Periodic determinations of other electrolytes are advised in patients treated with high doses or for prolonged periods, particularly in those on low salt diets.

Hyperuricemia may occur. Reversible elevations of the BUN and creatinine may occur, especially with dehydration and in patients with renal insufficiency. Bumex may increase urinary calcium excretion. Possibility of effect on glucose metabolism exists. Periodic determinations of blood sugar should be done, particularly in patients with diabetes or suspected latent diabetes.

Patients should be observed regularly for possible occurrence of blood dyscrasias, liver damage or idiosyncratic reactions.

Especially in presence of impaired renal function, use of parenterally administered Bumex should be avoided in patients to whom aminoglycoside antibiotics are also being given, except in life-threatening conditions.

Drugs with nephrotoxic potential and bumetanide should not be administered simultaneously. Since lithium reduces renal clearance and adds a high risk of lithium toxicity, it should not be given with diuretics.

Probenecid should not be administered concurrently with Bumex.

Concurrent therapy with indomethacin not recommended.

Bumex may potentiate the effects of antihypertensive drugs, necessitating reduction in dosage.

Interaction studies in humans have shown no effect on digoxin blood levels.

Interaction studies in humans have shown Bumex to have no effect on warfarin metabolism or on plasma prothrombin activity.

Pregnancy: Bumex should be given to a pregnant woman only if the potential benefit justifies the potential risk to the fetus.

Bumetanide may be excreted in breast milk.

Pediatric Use: Safety and effectiveness below age 18 not established.

ADVERSE REACTIONS: Muscle cramps, dizziness, hypotension, headache and nausea, and encephalopathy (in patients with preexisting liver disease).

Less frequent clinical adverse reactions are weakness, impaired hearing, rash, pruritus, hives, electrocardiogram changes, abdominal pain, or thrush pain, musculoskeletal pain and vomiting.

Other clinical adverse reactions are vertigo, chest pain, ear discomfort, fatigue, dehydration, sweating, hyperventilation, dry mouth, upset stomach, renal failure, asterixis, itching, nipple tenderness, diarrhea, premature ejaculation and difficulty maintaining an erection.

Laboratory abnormalities reported are hyperuricemia, azotemia, hyperglycemia, increased serum creatinine, hypochloremia, hypokalemia, hyponatremia, and variations in CO₂ content, bicarbonate, phosphorus and calcium. Although manifestations of the pharmacologic action of Bumex, these conditions may become more pronounced by intensive therapy.

Diuresis induced by Bumex may also rarely be accompanied by changes in LDH, total serum bilirubin, serum proteins, SGOT, SGPT, alkaline phosphatase, cholesterol, creatinine clearance, deviations in hemoglobin, prothrombin time, hematocrit, platelet counts and differential counts. Increases in urinary glucose and urinary protein have also been seen.

DOSAGE AND ADMINISTRATION:

Oral Administration: The usual total daily dosage is 0.5 to 2.0 mg and in most patients is given as a single dose.

Parenteral Administration: Administer to patients (IV or IM) with GI absorption problem or who cannot take oral. The usual initial dose is 0.5 to 1 mg given over 1 to 2 minutes. If insufficient response, a second or third dose may be given at 2 to 3 hour intervals up to a maximum of 10 mg a day.

HOW SUPPLIED: Tablets, 0.5 mg (light green), 1 mg (yellow) and 2 mg (peach), bottles of 100 and 500, Prescription Paks at 30, Tel-E-Dose[®] cartons of 100. Imprint on tablets: 0.5 mg—ROCHE BUMEX 2, 1 mg—ROCHE BUMEX 1, 2 mg—ROCHE BUMEX 2.

Ampuls, 2 ml, 0.25 mg/ml, boxes of ten.

Vials, 2 ml, 4 ml and 10 ml, 0.25 mg/ml, boxes of ten.

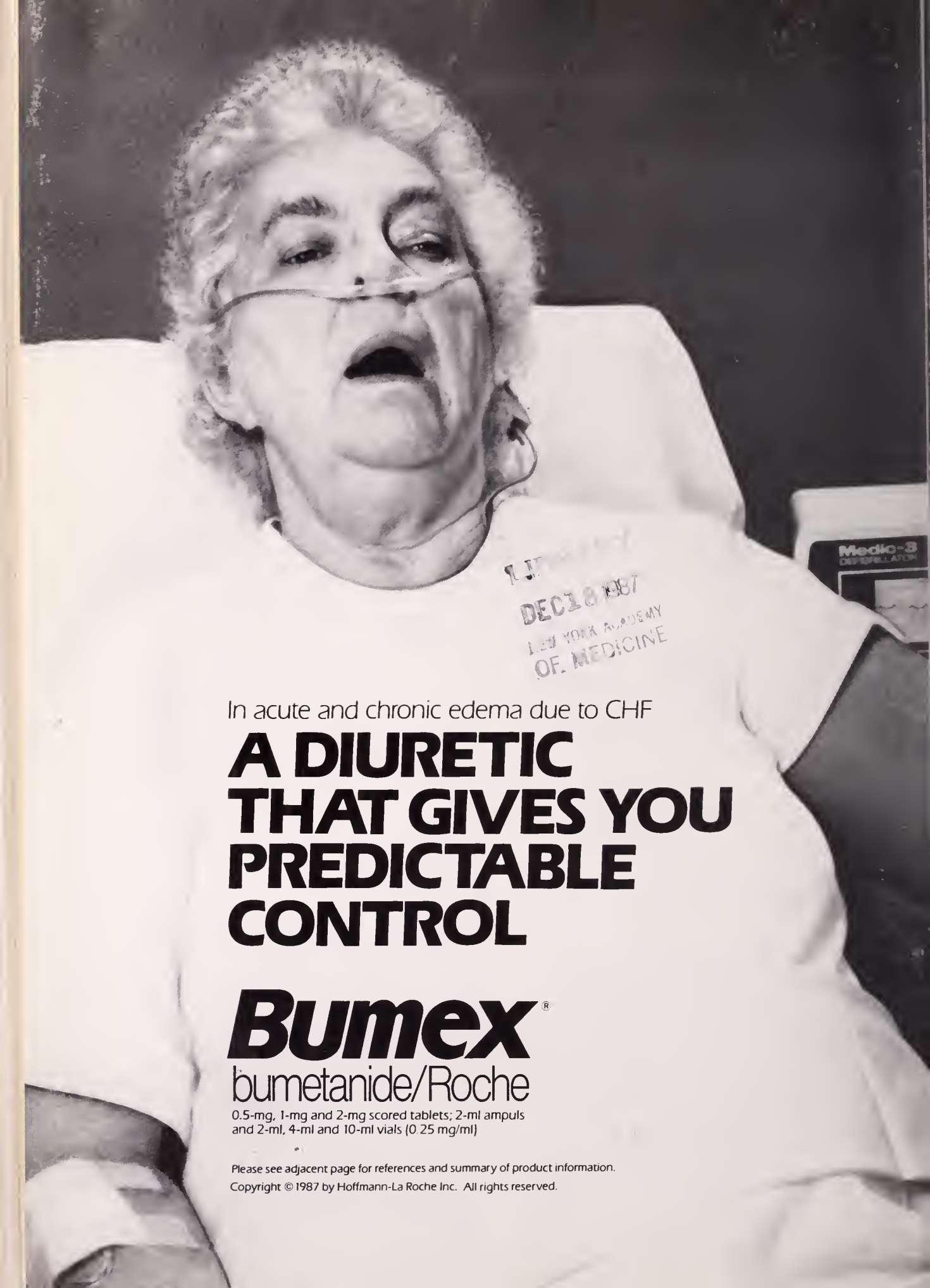
P. I. 0985

Roche Laboratories



a division of Hoffmann-La Roche Inc.

Nutley, New Jersey 07110



In acute and chronic edema due to CHF

**A DIURETIC
THAT GIVES YOU
PREDICTABLE
CONTROL**

Bumex[®]
bumetanide/Roche

0.5-mg, 1-mg and 2-mg scored tablets; 2-ml ampuls
and 2-ml, 4-ml and 10-ml vials (0.25 mg/ml)

Please see adjacent page for references and summary of product information.
Copyright © 1987 by Hoffmann-La Roche Inc. All rights reserved.

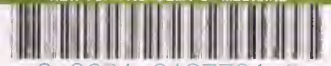
The New York Academy of Medicine

DUE IN 4 WEEKS UNLESS RENEWED

NOT RENEWABLE AFTER 8 WEEKS

[illegible]

NEW YORK ACADEMY OF MEDICINE



3 0681 0187701 8

